JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

3rd Series No. 8] JUNE 1946 [Vol. 53

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Journal

THE ANNUAL RECEPTION

Members are reminded that the first post-war Annual Reception will take place on Friday, 28 June, at 8 p.m. The President and Lady Thomas will receive in the Henry Florence Hall. The Knutsford Exhibition and a Library Exhibition of books, prints and drawings will be on view; a recital will be given in the Henry Jarvis Hall by Miss Rose Hill and Mr. Roderick Jones, of the Sadler's Wells Opera Company, with Mr. Stanley Mobsby at the piano. Charles Ernesco's Quintet will provide music on the second floor. There will be buffets in the Henry Florence Hall and Members' Room. Tickets are 7s. 6d. each. The restriction on members bringing not more than one guest each has been removed. Uniforms or lounge suits will be worn.

A.A. COUNCIL 1946-47

The new Council of the Architectural Association for the forthcoming session is:—*President*, Graham R. Dawbarn [*F.*] (second term of office); *Vice-Presidents*, R. E. Enthoven [*F.*], Ralph Tubbs [*A.*]; *Hon. Secretary*, Eric L. Bird [*A.*]; *Hon. Treasurer*, Henry Braddock [*A.*]; *Hon. Editor*, Hugh Casson [*A.*]; *Hon. Librarian*, Alfred S. Knott [*A.*]; *Past-President*, A. F. B. Anderson [*F.*]; *Ordinary Members of Council*, A. R. F. Anderson [*F.*], John R. Atkinson [*A.*], Anthony M. Chitty [*F.*], S. E. T. Cusdin [*A.*], F. E. B. MacManus [*F.*], Lionel G. Pearson [*F.*], Anthony Pott [*A.*], Mrs. Howard Robertson [*A.*], Peter F. Shepheard [*A.*], Hilton Wright [*A.*].

ROYAL INSTITUTION OF CHARTERED SURVEYORS

His Majesty the King has commanded that the name of the Chartered Surveyors' Institution be changed to the Royal Institution of Chartered Surveyors.

"BUILDING NOW" ATTENDANCES

The total attendance at the "Building Now" Exhibition when it was on view at the Royal Institute was 6,500. This is considerably more than was achieved by any pre-war R.I.B.A. Exhibition, with the exception of "Everyday Things". Also a very high proportion of the attendance consisted of members of local authorities and of persons interested in housing, which means that the Exhibition Committee achieved in great measure its object of attracting a specialised audience.

CALL-UP TO THE FORCES IN 1947 AND 1948

The Government's White Paper which was issued at the end of May has been referred to the Demobilisation Committee and is receiving their immediate consideration.

LEWIS MUMFORD

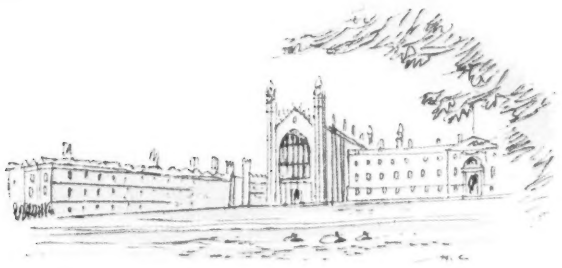
Lewis Mumford [*Hon. A.*], the celebrated American sociologist and writer, is to lecture at the Royal Institute on Friday, 12 July at 6 p.m. Mr. Mumford's books *Technics and Civilization*, *The Culture of Cities* and *Science and Man*, not to mention the many others he has written, enjoy a world-wide reputation among architects and exert a profound influence on present trends in town planning, housing and the social arts generally. The meeting at the R.I.B.A. is therefore likely to be very fully attended.

Eric Schaal

Born in 1895 and educated at Columbia University, Lewis Mumford has been Professor of Humanities at Stanford University since 1942. He was a colleague and disciple of the late Sir Patrick Geddes, a fact which he says he is proud to acknowledge. It is therefore fitting that he should return to the country from which came the original impetus of his work and see for himself the fruitful development of Geddes' ideas now taking place. The Royal Institute is delighted to welcome so distinguished an Honorary Associate.

LECTURES ON OFFICE ORGANISATION

Arrangements are being made for the next lecture in the series on "Office Organisation" to be held in the autumn just after the beginning of the 1946-47 session. Details will be announced as soon as they are finally arranged. A considerable number of enquiries about the remainder of the series has been received. The first informal discussion-lecture is reported in this number of the JOURNAL (pages 327 to 332).



Drawing by Hugh Casson [A.] from catalogue of the Stockholm Exhibition of British Town Planning (see page 352).

Royal Fine Art Commission

The *London Gazette* for 21 May publishes a Warrant under His Majesty's Royal Sign Manual revising the constitution and membership of the Royal Fine Art Commission.

As regards the constitution, the principal change is from a body which could do little more than give advice when asked to do so to one which has power to call evidence and make investigation on its own initiative. The Commission says with regard to the original Warrant which is now rescinded, that the Commission was " to inquire into such questions of public amenity or artistic importance as may be referred to them from time to time by any of the Departments of State, and to report thereon to such Departments ; to give advice on similar questions when so requested by public or quasi-public bodies . . . and, if they so desire, to call the attention of any of Our Departments of State, or the appropriate public or quasi-public bodies, to any project or development which in the opinion of the said Commission may appear to affect amenities of a national or public character."

The new Warrant says : " We do give and grant unto you, or any three or more of you, full power to call before you such persons as you so judge likely to afford you any information upon the subject of this Our Commission ; and also to call for, have access to and examine all such books, documents, registers and records as may afford you the fullest information on the subject, and to inquire of and concerning the premises by all other lawful ways and means whatsoever : We do authorise and empower you, or any three or more of you, to visit and personally inspect such places as you may deem it expedient so to inspect for the more effectual carrying out of the purposes aforesaid."

Two members of the Commission are to retire annually, except the Chairman ; the last item of the Warrant gives the Commission liberty to report proceedings to His Majesty from time to time if they think fit to do so.

The new membership of the Royal Commission is as follows :—

The Earl of Crawford and Balcarres, Viscount Lee of Fareham, Sir Kenneth Clark, Sir Patrick Abercrombie [*F.*], J. Hubert Worthington, A.R.A. [*F.*], Ralph Freeman, E. Maxwell Fry [*F.*], Charles Holden [*F.*], Professor W. G. Holford [*A.*], Edward Maufe, A.R.A. [*F.*], Raymond Mortimer, R. C. Norman, Professor A. E. Richardson, R.A. [*F.*], Professor Geoffrey F. Webb, John Wheatley, A.R.A., Charles Wheeler, R.A.

M.O.W. Exhibition of Standard Products for Housing

Members should make a point of visiting this exhibition now open at Princes Galleries, Piccadilly. It shows those materials and fittings now becoming available for housing and on which manufacturing resources will be concentrated. It is open to architects and other members of the building industry on presentation of a business card until 29 June from 10 to 6, Saturdays 10 to 1. After July it will be open to the public at a small charge. A review of the exhibition will appear in the July Journal.

Report on Architectural Education

The Report of the R.I.B.A. Special Committee on Architectural Education has now been published by the Council and is on sale at the R.I.B.A. at 2s. 6d. per copy, plus 3½d. postage. It is the work of a special committee set up by the R.I.B.A. Board of Architectural Education in 1939 " to consider the present state of architectural education and to make recommendations."

The Council consider the contents to be of such public and professional interest as to warrant immediate publication verbatim and desire to express their warmest thanks to the Committee who have produced it. It should, however, be understood that neither the Council nor the Board are committed to the views expressed, which are those of the Committee. The Council have referred the Report back for full consideration.

Index of Members' Work

Many members have not completed and returned Questionnaire " B " which was issued in 1944. The index, based on the returns received, is now practically completed and is in use. The purpose of the Questionnaire was to obtain information of work carried out by members. It is essential that the index should be as complete as possible and members who have not sent in returns are urged to obtain copies of the Questionnaire from the Secretary and complete and return them without delay.

Westminster Housing Competition

The premiated designs in the Westminster Housing Competition are to be on view at the R.I.B.A. from 16 July to 31 July. This is the first step in a new policy whereby premiated designs in important competitions will be placed on view to members in the R.I.B.A. The arrangements will be in the charge of the Public Relations Committee, who will exhibit the premiated designs of competitions as recommended by the Competitions Committee.

Closing of The Library

It is expected that the Library will be closed from July 22 to August 31, to reopen in its normal premises on the third and fourth floors on September 2, 1946.

Should any adjustments have to be made in these dates, an announcement will be made in the architectural weekly press.

It is hoped to keep current periodicals available.

In cases of extreme urgency only will it be possible to issue books on loan during the period in question.

R.I.B.A. Architectural Science Board and Journal

Applications are invited for the post of Secretary to the Architectural Science Board and Technical Assistant Editor to the Journal. Preference given to a member of the R.I.B.A. with some scientific background and literary ability. Duties, which would be whole time, would be to manage the work of the Board and of its Committees and to prepare material for the technical and scientific sections of the Journal. Commencing salary £600 per annum. Apply in writing to the Secretary, R.I.B.A. before July 22, 1946.

R.I.B.A. Diary

Tuesday, 25 June, 6 p.m. Informal General Meeting.
The Place of the Architect in the Post-war World
By *Gerald Barry* [*Hon. A.*]
Announcement of Council Election Results

Thursday, 20 June, to Thursday, 27 June. Exhibition of
Architects' Working Drawings

Tuesday, 25 June, 6.30 p.m.
Informal Students' Evening

Friday, 28 June. Annual Reception

Friday, 12 July, 6 p.m. Special Lecture.
A World City for the United Nations
By *Lewis Mumford*

Tuesday, 16 July, to Wednesday, 31 July. Exhibition of
Westminster Housing Competition
Premiated Designs

MEMBERS' SUBSCRIPTION RATES AND REBATE TO ALLIED SOCIETIES

Increased Activities of the Institute

The steady expansion of the scope of the Institute's activities in the period between the wars and the certainty that this expansion will continue in the post-war period are reflected in the approval recently given by the Council to a form of staff reorganisation which :—

(a) sets up a separate Public Relations and Exhibitions department ;

(b) separates the duties of Librarian and Editor, making each a full-time officer ;

(c) creates a new appointment in the person of the Salaries Negotiating Officer.

This reorganisation illustrates the trend of development of the Institute's activities—the growing status of the Institute as a representative body to be brought more and more frequently into consultation by Government Departments, Local Authorities and other public bodies : the development of the Library as the acknowledged centre of architectural information : the complementary expansion of the JOURNAL : and the increased attention given to the interests and well-being of the salaried architect.

Within these broad fields the day-to-day business of the Institute has increased enormously until, at the present day, correspondence and the number and variety of data handled have never been greater.

Increased Expenditure

The Council have therefore approved certain further additions to the staff. They are satisfied that these additions are not out of proportion to the general increase in activity and that without them the work of the Institute cannot be carried out efficiently. The alternative would be a policy of retrenchment involving the curtailment of activity, a course which the Council have not contemplated in this period of reconstruction and at this stage of the Institute's development.

As a short term policy, the additional cost might be met by adding to the existing debt, in the hope of retrieving a balance at some later date. But in view of other long-term commitments, notably the redemption of the mortgage on the premises and the rebuilding of No. 68 Portland Place, which has to be completed by 1960, this cannot be regarded as a satisfactory solution. The Council accordingly investigated the desirability of raising subscriptions and at the same time reviewed the scheme which has now been in operation for a number of years by which a part of a member's subscription is made over to an Allied Society of which he is also a member.

Recent History of Subscription Rates

Fellows. Prior to 1877, Town Fellows paid an annual subscription of four guineas, and Country Fellows two guineas. The distinction between town and country was abandoned in that year, when all Fellows were required to subscribe four guineas.

In 1921, the Fellow's subscription was raised to five guineas, but in the case of Fellows resident in the trans-oceanic Dominions who were also members of Allied Societies in those Dominions it was reduced in 1932 to three guineas.

Associates. In 1877, the classes of Town and Country Associate (who paid two guineas and one guinea respectively) were also merged, and the subscription of all Associates fixed at two guineas.

In 1921, the Associate's subscription was raised to three guineas, but in the case of those resident in the trans-oceanic Dominions who were also members of Allied Societies in those Dominions it was reduced in 1932 to two guineas.

Licentiates. From 1910 to 1920 inclusive, Licentiates paid an annual contribution of one guinea, which was increased in 1921 to two guineas and in 1926—when they were admitted to corporate membership—to three guineas, at which level it now stands. The subscription of Licentiates resident in the trans-oceanic Dominions who are also members of Allied Societies in those Dominions was fixed in 1932 at two guineas.

Students. From 1921 to 1925 inclusive, Students paid an annual contribution of 10s. 6d. This was increased in 1926 to a guinea, the present amount, which is paid by all Students except those overseas, who are allowed to remain on the Register of Students for a period of five years without payment.

Retired Members. Since 1931 the annual subscription required of retired Fellows, Associates and Licentiates has been a guinea, except in the cases of members who have paid subscriptions for thirty years or who are retired members of the former Society of Architects.

History of Rebate to Allied Societies

The practice of making over a part of a member's subscription to an Allied Society of which he is also a member was first introduced in 1889 (when it cost the Institute £77). The proportion so paid was then to be " not more than *one-fourth* of the annual subscription paid to the Royal Institute by each member thereof who is also a member of such Society." This proportion was maintained until 1925 when the Bye-laws were revised to provide for the payment of " such proportion not exceeding *one-third* as the Council may from time to time determine . . ."

No further change was made until the outbreak of war in 1939, when the Council decided to revert to the one-fourth basis.

Increased Subscription Rates

It will be seen that there has been no substantial increase in subscription rates since the end of the last war. In the light of present conditions and changed monetary values and in order to strengthen the Institute's financial position to meet both known commitments and unforeseen contingencies, the Council have decided that, with effect from 1 January 1947 the subscriptions of Fellows shall be raised by *two guineas*, of Associates and Licentiates by *one guinea* and of Students by *half-a-guinea*.

The subscription of Fellows, Associates and Licentiates resident in the trans-oceanic Dominions who are also members of Allied Societies in those Dominions will be raised by *one guinea*.

The subscriptions due from members on 1 January 1947 will thus be :—

Fellows	£7 7 0
Associates	£4 4 0
Licentiates	£4 4 0
Students	£1 11 6
From members resident in trans-oceanic Dominions who are also members of Allied Societies in those Dominions :—	
Fellows	£4 4 0
Associates	£3 3 0
Licentiates	£3 3 0
From Retired Members (with the exception of those who have paid subscriptions for thirty years or who are retired members of the former Society of Architects)	£1 1 0

Increased Rebate to Allied Societies

The Council have also decided to revert, with effect from 1 January 1947 to the pre-war practice of making over to an Allied Society one-third of the subscription paid to the R.I.B.A. by each member or Student who is also a member of that Allied Society, and has an office, or resides, in the district of that Society.

The increases now decided upon will, therefore, not only strengthen the financial position of the Institute but will enable the Allied Societies to develop their activities and play their part in promoting the interests and welfare of the profession to a greater degree than has been possible hitherto owing to financial stringencies.

FORESHORE DEVELOPMENT AT MABLETHORPE AND SUTTON-ON-SEA, LINCS.

Architect: G. A. JELLICOE [*F.*]

A town planning and development scheme for six miles of foreshore, embracing two towns and a village, is a promising alternative to otherwise inevitable bungaloid growth. Since 1943 the U.D.C. of Mablethorpe and Sutton has formed one of the constituent bodies of the East Lincolnshire Joint Planning Committee. This new scheme, which is linked with sea defence works, is designed to turn this stretch of dune-lined, flat coast into a holiday resort for industrial workers from the East Midland towns.

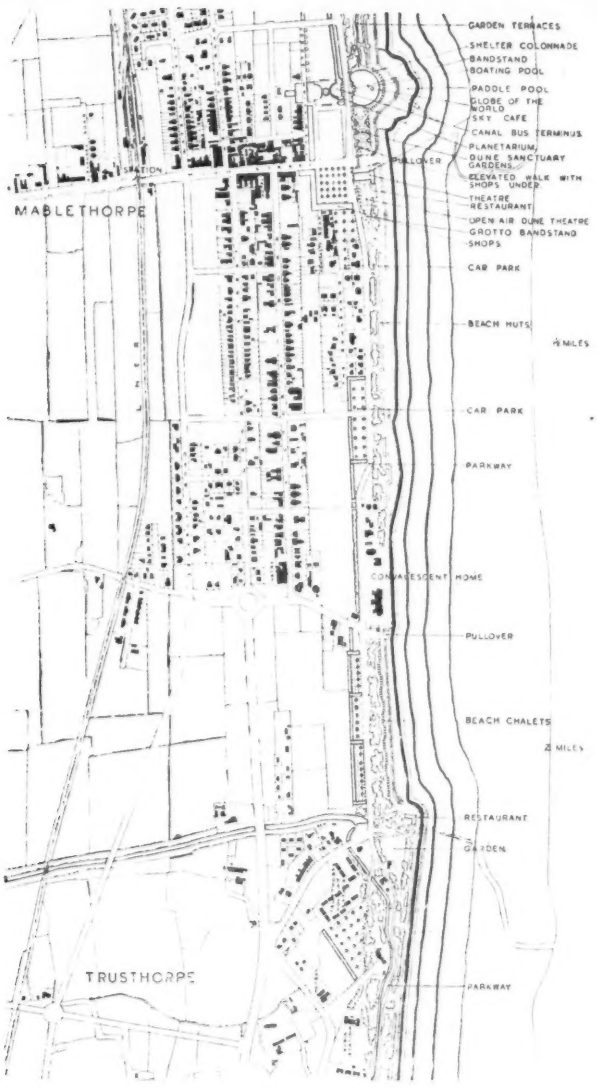
The photograph on this page of a typical piece of foreshore indicates the general nature of the site. The long sea wall is to be backed by a promenade, behind which the dunes are to be planted as a continuous but varying garden on a scheme of planting designed by Miss Sylvia Crowe, F.I.L.A. The coast road is planned as a tree-lined parkway to landward of the dunes and promemade. An existing land drainage channel is to be widened to form a navigable boating canal; old excavations at Trusthorpe are to be converted into a series of lakes. More than 1,000 permanent beach huts are to be constructed in groups along the dunes.

The centre of the scheme lies at Mablethorpe where are to be constructed a boating lake terminating the canal, a pavilion, restaurants, open-air auditorium, planetarium and dune gardens. A motor-boat service is to run along the canal from a holiday camp at the other end.

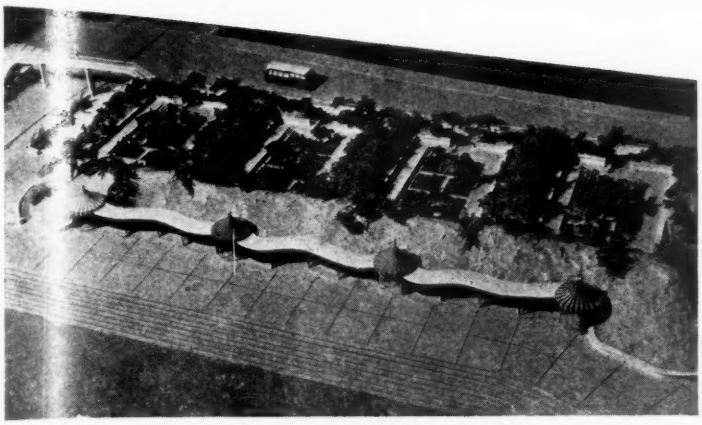
The pavilion is designed as a dual purpose building, that is to say, as either a theatre or dance hall. The dance floor and its sub-structure rest above the lower part of the theatre rake and can be "skied" by means of a series of counterbalanced, motor-driven pulleys. When in the "up" position it forms the ceiling of the theatre. Mr. Jellicoe has found that the cost in labour of periodical removal of seating from a flat-floored hall to prepare it for dancing is, over several years, far greater than the capital and running costs of this novel installation. Moreover, it allows the theatre seating to be properly raked and conversion can be carried out in a few minutes.

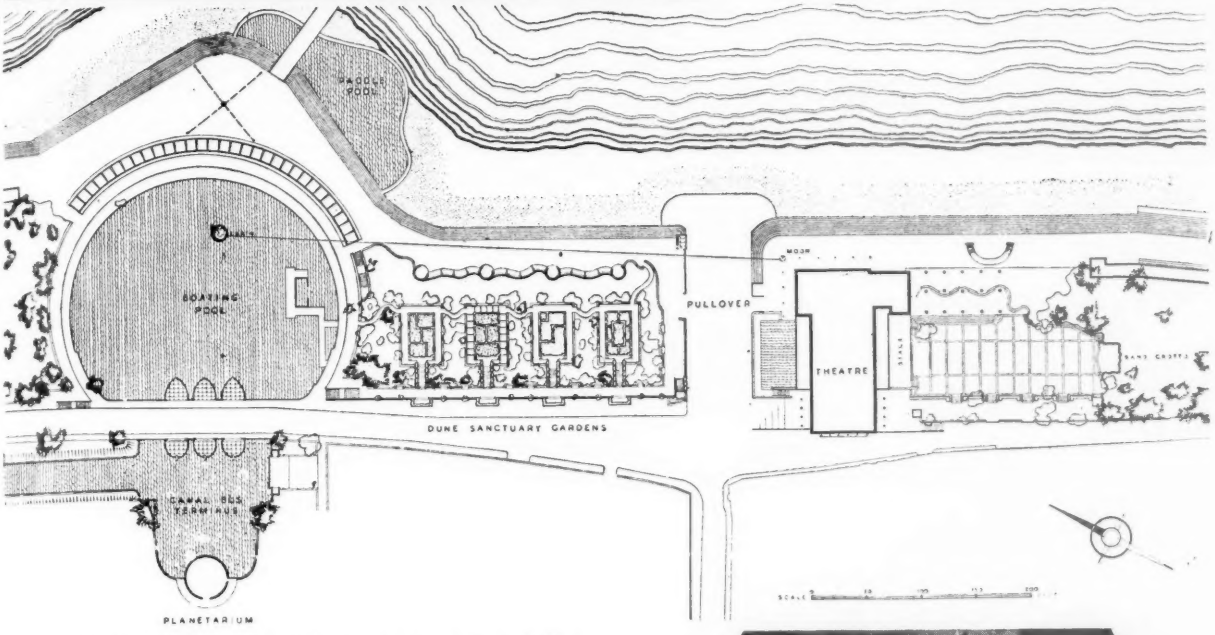
The open-air auditorium is a flat-paved space, adjacent to the pavilion and well sheltered. At one end there is a bandstand and at the other a stage on which concert parties can perform. Attached to the pavilion is a large glass-walled café at first floor level; this has the service in the centre so that a high proportion of users can have "a seat by the window." The space beneath the café is open, which, with abundant covered spaces elsewhere, is a wise recognition of the fact that it sometimes rains even in the best regulated seaside resort.

The planetarium will be the first built in Great Britain. It makes use of an elaborate machine which projects the movements of the solar system and planets on the inside of a hemispherical dome. In the middle of the boating lake will be a model of the world, while near the pavilion, at the correct scale in distance and size will be a model of the moon. Brightly



Above, plan showing the general layout of the scheme. Below, a typical stretch of dune-lined foreshore north of Mablethorpe as at present.



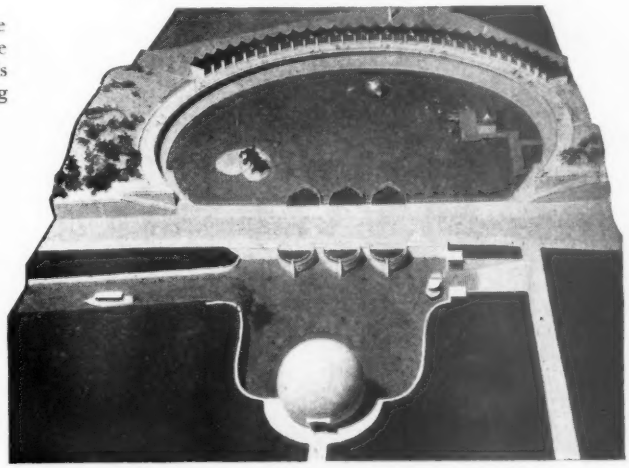


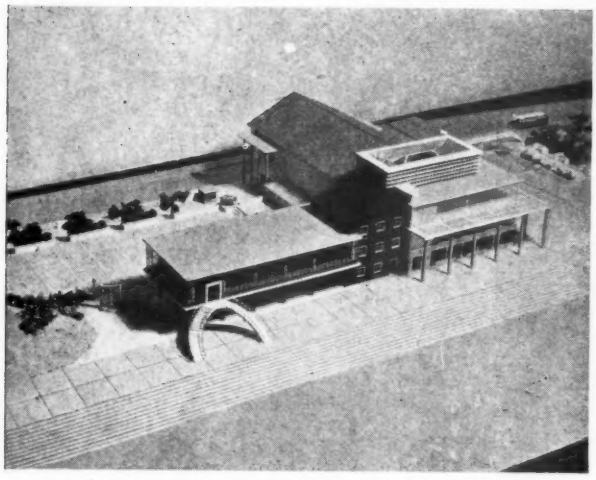
Above, view of model showing sand dunes near the pavilion converted into gardens. Middle, the general layout plan of the centre at Mablethorpe. Below, the model of the boating lake, the end of the canal and the planetarium.

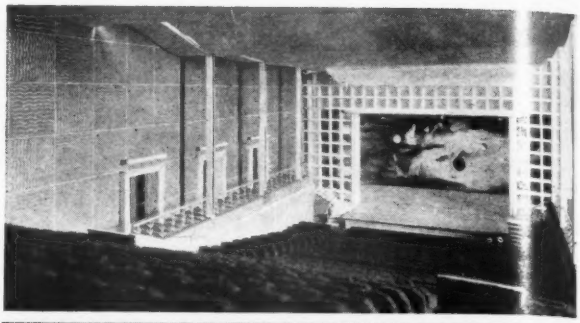
coloured kiosks, shelters and cafés are planned at suitable intervals along the front. The existing sports facilities in the form of a golf course, bowling and putting greens and tennis courts are to be augmented by new tennis courts and bowling greens.

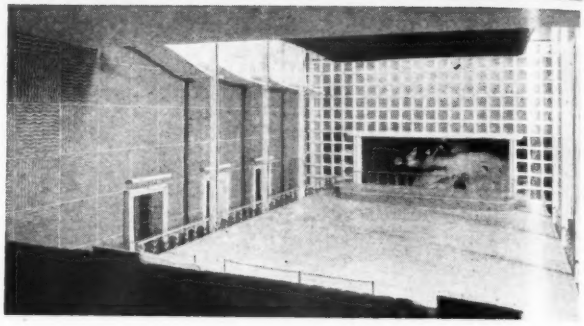
Work on the scheme is starting shortly. The Urban District Council has purchased the sand dunes between Mablethorpe and Sutton-on-Sea; much of the sea wall exists and is now being extended. Planting is to start in the autumn. It is hoped to have a big proportion of the layout work completed by the summer of 1947.

The scheme was recently exhibited privately in London to planners and other interested persons for two days. The exhibition was opened on the first day by Mr. F. Marshall, M.P., Parliamentary Secretary to the Ministry of Town and Country Planning and on the second day by Miss Mary Glasgow, Secretary-General of the Arts Council of Great Britain.

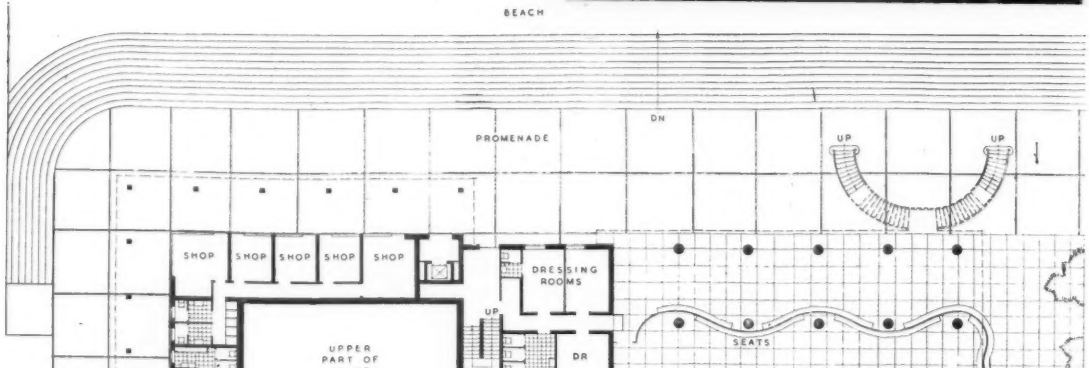








Above, model of the pavilion as seen from the sea. On the left is the restaurant with the pavilion facing inland. Right, two views of the interior of the pavilion showing it with the dance floor raised as ceiling to the theatre and lowered for dancing. Below, the plan of the pavilion.



THE APPLICATION OF AIR PHOTOGRAPHY TO ARCHITECTURE AND TOWN PLANNING

FRANK SCARLETT, B.A. [*F.*]

A Paper read at a Meeting of the R.I.B.A. Architectural Science Board on Wednesday, 1 May, 1946

S. ROWLAND PIERCE [*F.*] in the Chair

The magnitude of the tasks before us in reconstruction and planning the future development of our country and Empire makes it necessary for those who are engaged in planning in its widest sense to assimilate a vast amount of information, not only technical but involving knowledge of every phase of the life of the community, to ensure that our plans may fulfil its needs to the fullest extent. The architect or planner is no longer only a specialist technician. His work has fully to accommodate the functions of the nation as a whole.

The difficulty we are faced with is in visualising the many different determinant factors which must shape our plans. Although the planner must to a great extent depend upon the researches of others to give him the facts upon which to work, he must himself see them whole and in their true proportions if his plans are to give them proper expression. To assist in our greatly magnified task we have a new instrument, largely developed during the war, in air photography and the interpretation of air photographs.

Although you are all doubtless aware that a very important part was played during the war by air photography, the full scope of the technique which has been developed and its application to the problems of peace-time development and reconstruction which concern us here to-night may not be so fully appreciated. It is my purpose firstly to present some idea of the basic technique of air photography and then to indicate broadly the very wide potential field of application and the numerous uses to which the interpretation of air photographs can be put; after this I shall show examples of air photographs illustrating various subjects bearing on town planning and proceed to a more detailed examination of the practical use of air photographs to the town planner and the architect.

I am unable, even if time permitted, to give an account of the war-time history of the Photo Reconnaissance organisation. I would, however, like to say that the organisation was built up by a few enthusiasts, drawn from a variety of peace-time pursuits (including architecture), from practically nothing at the beginning of the war, in the teeth of a certain amount of obstruction, to a very large organisation which played a vital part in practically every form of offensive and defensive operations and which provided intelligence, detailed to a degree which I do not think is yet fully understood by the public, of every phase of the enemy's naval, military, air and economic activity. The most exact information of enemy movements was continuously supplied by photos taken by aircraft, unarmed, flying at heights of 30,000 ft. or more, or in overcast weather zooming down to within point-blank range of defences.

To deal first with the technique of photographic interpretation: before the war the popular knowledge of air photographs was in general confined to obliques, that is to say photographs taken from the air at an angle and usually from a fairly low altitude, which, like views of St. James' Park and Buckingham Palace, while they gave a fairly comprehensive view of their subject, were mainly pictorial and did not yield much additional information from more detailed inspection. The high altitude vertical photograph, on the other hand, yields an amazing amount of detailed information which may be scientifically and to a great extent quantitively extracted when subjected to examination by a skilled interpreter. An architect, for example, will at once appreciate that this vertical photograph of the Houses of Parliament reveals the planning of the group to a far greater degree than the oblique view of the same area. Although the full yield of knowledge can, perhaps, only be gathered by a specialist, the planner can fairly easily acquire enough skill in the use of air photographs at all events to appreciate the findings of the specialist, and it is my opinion that planners would gain from being able to use this technique as an adjunct to their work on the drawing board.

In dealing with high altitude photographs, the use of a stereoscope is essential: a single photograph appears flat, with no relief. A dark mark may be either a shadow of an object, a projection above the general surface, or a recession. But if you take two photographs taken from slightly different points of view and look at them under a stereoscope, they fuse into one image and immediately you see all the trees, houses, valleys and hills standing out in sharp, exaggerated relief. This is the technique that enabled the exact amount of productivity of an enemy factory to be gauged or new types of aircraft to be identified from photographs taken six miles up. Unfortunately ordinary stereo pairs cannot be projected on the screen, but I have here examples of stereo pairs of some of the single photographs which will be shown on the screen for those of you who are unfamiliar with stereoscopy of air photographs to examine afterwards. In order to provide continuous stereographic views, the line overlap, a succession of overlapping photographs over a strip of territory taken by means of an automatic camera shutter on a continuous film, was adopted and has remained the standard technique—width of strip covered laterally being increased by mounting two, three or four cameras to take overlapping adjacent strips.

It is now necessary to say something on the question of scale. The scale of an air photograph is easily determined by a simple calculation from the height of the aircraft and the focal length of the camera.

Thus the same scale of 1 in 10,000 is achieved by an aircraft with a 36 in. focal length lens flying at 30,000 ft. as by an aircraft with 12 in. focal length lens at 10,000 ft. Therefore if you are ordering air photographs for a specific purpose, you should not specify the height at which they are to be taken, but should say:

1. What purpose—what you want to see from the photos.
2. What scale you think would best meet your needs.
3. The width and extent of area required to be photographed.

In peace-time work, development will probably be towards a larger scale of photography with slower flying aircraft, whereas during the war it was towards higher altitudes and faster machines.

Now, in indicating some of the information which air photographs can provide and showing you some of the things which can be seen on air photographs, the first point, and one of the most important points that I wish to make in connection with its bearing on town planning is what else you can find out other

than what you are immediately looking for. It was so during the war when some of the most important discoveries were made almost by chance. Air photos show the whole physical environment and to a large extent the complete ecology—or relation of organisms, animal as well as vegetable—to their environment. All of us who are engaged in planning realise that our greatest difficulty is to grasp, in their correct proportion and relationship, the whole of the factors at play in a certain area. Air photography, if it does not at once present complete statistical data on all subjects, at least gives the raw material from which information can, by skilled interpreters, be obtained, and in addition—and it is this that is of the greatest importance to us—presents a complete synoptic picture to the eye of the designer or planner which can be afforded by no other means.

I would emphasise, and will show by means of examples, that air photographs will preserve our balance, will show the agriculturalist the claims of the city and the town planner the problems of the countryside—and used properly may be of use in resolving many problems of apparently conflicting interests.

In considering the many applications of air photography, I will first mention topographical surveys. The basic requirement of planning of any kind is the availability of accurate and up-to-date large scale maps. This country is adequately provided in this respect, but for approximately three-quarters of our Colonial Empire no maps to a larger scale than one to one million exist, and it is impossible to visualise their provision within any reasonable time by any other method than by air survey. The technique of air survey for primary mapping is, however, too large and specialised a subject to enlarge upon to-night, so I shall confine myself to its application to this country, where maps already exist.

I believe that the United Kingdom is unique in that its maps are founded on a basic map to a large scale—i.e. the 1 in 2,500 Ordnance Survey—which is delineated with optimum accuracy. The problem is their revision. It was one of the main points of the Davidson report that the policy of *periodic* revision (once in twenty or in some counties forty years) of the basic maps should be superseded by one of *continuous* revision, and that to this end the full resources of air photography should be used. Here I have two examples showing map revisions made from air photographs. The latter also shows, perhaps, that certain plans can only be fully appreciated from the air !

In the case of certain urban areas where the need for reconstruction is urgent, it is, I understand, being proposed to use air photography to provide up-to-date town plans. This is being done—as a short term policy—by superimposing air photos of the areas between streets on the basic map and leaving the streets white as on the original map. By this means questions of rectification of distortion and other technical photogramatric problems are by-passed and an up-to-date picture, showing recent developments, blitzed areas, trees and vegetation, is at the service of the planner. From large scale vertical photographs, that is to say scales in the region of 1 in 5,000, a degree of accuracy of plus or minus 6 in. or even more can be achieved in mapping, which is accurate enough for a general layout of a wide area, and again if the area is large enough, at a much less cost than by ground survey. In addition, many natural and other features not usually found on maps can be shown. I hope that it may be possible to secure the co-operation of members of this Institute in making comparisons of the costs of air versus ground survey in order to determine the minimum area of which an air survey is economically advantageous.

The next, and a most important point in favour of air survey is that the same photographs as those from which the flat projection is obtained give almost as complete information on the vertical projection. In other words complete contours, to a degree of accuracy of plus or minus two feet, can be obtained from vertical photographs. This is done by an extension of the principle of stereoscopy and has been perfected by the Wild machine. In the preparation of fully contoured maps the saving in cost over ground methods of survey, more particularly in inaccessible territory, must be impressive.

To proceed to some of the other applications of air photography which have a bearing on planning, the planned development of agriculture is part of the same problem as that of our towns and cities and of no less importance. To formulate a national policy for land utilisation, adequate data concerning its present use is essential.

Agricultural statistics on land utilisation are laborious to compile by ground survey, and it is, moreover, impossible to achieve simultaneity or uniformity of classification over the whole area. On the other hand, by air survey, say at ten-year intervals, statistics could very easily be compiled giving areas of localities. Various kinds of cultivation can be readily observed. By a limited amount of ground survey and sampling, and perhaps, by a skilled interpreter, even without, data obtained from a small area can be applied to a much wider area, and a complete survey of land utilisation be made from air photographs.

Another important advantage of air photographs is in respect of boundaries. The maps show all divisions between land, whether barbed wire fences or 15 ft. Devonshire hedges, as simple lines, whereas they can easily be distinguished on air photographs such as a typical area in Oxfordshire, showing arable land and pasture and different types of field divisions. This is a matter of great importance if the economic size of farming units in this country is to be considered. The encroachment of bracken is another matter affecting agriculture where air photographs may be of value.

The silting of harbours, loss of land by marine erosion and encroachment by blown sand are matters of serious economic import on which air photographs can provide information which can be obtained in no other way. Similarly, problems of the control of floods and control of certain rivers, which have defied generations of engineers, are provided with a new mode of investigation, and even the ravages of ants, as shown in an area devastated by ant-hills, can be studied.

In forestry, as was recognised in an Oxford Forestry Memoir published in 1931, air photography provides new facilities for initial timber census and for periodic stocktaking ; from photographs different species of trees can be identified and their rate of growth observed. The extraction of timber can be planned, a deforestation controlled. This is shown by a reafforestation area on the shores of Loch Long. The various stages of planting and growth are clearly indicated by the denser colour of vegetation.

Air photographs have for some time been in general use for geological survey for mining, with particular reference to oil. Examples are a photograph of a desert area in Persia which, as you will realise, would from the nature of the country present a very serious physical problem to the ground surveyor ; then a mosaic or composite air photograph of a larger area of the same territory can be made, and finally a stratification map which can be made from the two photographs.

Other important uses of air photography, which I can do no more than mention in passing, are in the study of ocean currents and marine growth, control of malaria and other health services, and education, particularly in teaching geography and history. Also an immediate use in the survey of disasters such as floods, tornadoes or railway accidents.

To get nearer to our subject of planning, appreciation of the past is in my opinion essential if we are fully to understand the problems of the present and future and to give them their appropriate expression. In archæology the value of air photographs has long been appreciated, and was in fact demonstrated more than twenty years ago in O. G. S. Crawford's " Air Survey and Archæology." On an air view of Stonehenge you can notice how clearly the surrounding trench, the axial approach and the old tracks are shown. The use of photographs in identification of sites overgrown by crops and in detecting surface modifications too subtle easily to be discovered from the ground is extensive, as this example of an early British site will demonstrate. In this photograph the Celtic field patterns, covered by more recent division of the land, are clearly indicated. From air photographs of primitive communities we see the characteristic pattern of habitation, organically grown as a result of the natural

factors of the environment and economy of the community, each as characteristically different as the natural topography and vegetation. We see why certain settlements flourish at particular places and grow into important cities as a result of their geographical position; and how they grow in the form they do: for example, Venice. On a photograph we see not only the city but the physical reasons why it has arisen in its unique form at this particular place. It is defended by water from attack by land and sheltered from the sea by the spit of the Lido, whilst even without the modern causeway it is easy of access, by calm waters, to the mainland. The river channels in the alluvial bed flush out stagnant water from the canals and provide anchorages for the port. The habitations are closely packed on the higher levels of soil.

The formation of Amsterdam with its 90 islands and 300 bridges has proceeded in successive rings around the port, first confined by fortifications and later expanding over flat country on a gridiron plan. The characteristic Dutch field pattern of narrow rectangles should be noticed.

Nördlingen in Bavaria is a town which has been enclosed by a ring of fortifications in the 14th and 15th centuries and expanded very little beyond it, and remains a very charming example of a self-contained mediæval city with a strong corporate spirit, as shown by the dominating public buildings the Georg's Kirche and Rathaus. Later road developments have respected the old city by by-passing it.

In Durham also, the cathedral dominates the city, from the air as from the ground (may it continue to do so!). The newer suburbs, with their lower density and openness of planning, contrast with the congested mediæval city on the bend in the river.

The modern conception of planning did not arise until the nineteenth century confronted us with problems which never existed to anything like the same degree in the past. Industrial growth, increase in population, congested transport and unplanned economy produced the chaotic environment which is plainly shown by a view of London, where we see the ancient highways south of the river becoming more congested as they get further in, and the lack of clear relation between the roads and the bridges; the cluster of wharves and warehouses on the south bank calling for a re-development scheme as suggested in the County of London Plan; and on the north bank, St. Paul's, lacking a worthy precinct. The areas on the north side of the Thames which were laid out by large landowners in the eighteenth and early nineteenth century show by contrast a comparative orderliness. While the street pattern may be in places rather monotonous, it is alleviated by the numerous squares, which are among the best features of London. Observe also how Portland Place stands out. Would there were a few more such streets. The air photograph also indicates the primarily residential character of this part of London, now in many cases being lost, and which should in my opinion be preserved where possible.

The unimaginative regularity of Johannesburg, on the other hand, where the whole area of residential, commercial and industrial buildings is indiscriminately laid out in square blocks, shows no appreciation of the different type of street pattern and land sub-division for different uses. I have not seen this city, but however good individual examples of architecture may be, I cannot believe they are sited to the best advantage. A fairly recent housing estate is another example of geometrical planning, which is by contrast successful. These examples will, I hope, indicate that to the planner vertical air photographs show, more clearly than maps or any other means, the pattern of the growth of communities which is produced by the interplay of different factors such as topography, fertility of soil, economic and political conditions. It is the task of the designer to decide how far the existing pattern should be followed; adapted to meet changed conditions or disregarded as the product of circumstances no longer operative.

With regard to the practical use of air photography by the planner, in the actual drafting of layouts air photographs have great advantages in matters of detail which should be mentioned.

(*a*) For purposes of zoning, information can quickly be gained as to the type of user in built-up areas and the relationship of built-up land to open spaces. The nature of the latter will be shown where maps would not distinguish between park land, allotments and waste ground. A small scale photograph gives an idea of the relationship of the built-up area of Windsor to the surrounding country, still predominantly agricultural. Another photograph, to a larger scale, of Basingstoke shows a typical example of mixed, unco-ordinated development, with industry, railways, open spaces and main roads unrelated and haphazardly sited.

(*b*) In the selection of sites, mosaics, together with stereographic cover, provide all the information that would be shown on a cadastral plan combined with detailed inspection on the ground. On an air photograph the whole nature of the site with its means of access, services, trees, streams and other natural features can be comprehended as a unity and the physical aspects better appreciated, as seen on a photograph of a typically rural area, or on a more developed neighbourhood in which can be clearly seen the monotonous uniformity of bye-law development. You can observe the remaining patches of agricultural land, playing fields and the conspicuous appearance of allotments. The same can be seen on a more expensive type of low density residential area—probably more attractive because it is well wooded but essentially haphazard and unimaginative.

(*c*) In the location of industry, air photographs can be made to furnish data on existing mining and quarrying, transportation and other facilities which it would be necessary to consider in the selection of sites. The number and location of heavy smoke-producing plant, areas of dust deposition from quarries, cement works, etc., and the location of discharges of industrial effluent into natural water and other factors destructive of amenity can usefully be shown by air photographs. An interesting illustration of a modern port, Gdynia, illustrates its relation to the railway system, the port facilities, warehouses, quays and various naval and merchant shipping.

(*d*) In many localities information is lacking concerning the heights of existing buildings and air photographs provide a means of making a rapid census of building heights.

(*e*) Knowledge of the past is often extremely helpful in planning for the future. Air photographs often reveal in a striking manner the configuration of an area in the past which would otherwise be forgotten.

(*f*) For the purpose of records, air photography would be of great use. By means of mosaics flown at regular intervals it would be possible, over a term of years, to build up a complete series of records of the status of a locality at various periods, which it is practically impossible to do in an accessible form by other methods. Trends of development would be revealed which might otherwise remain undiscovered.

(*g*) Air photographs provide a very easy means by which the data may be obtained for the making of models which are of the greatest value in the presentation of planning proposals.

(*h*) Finally, as a practical method of drafting schemes, a sheet of codatrace or other completely transparent material superimposed on a large scale mosaic of the site can be used for sketching (with a china pencil) schemes in the rough and presenting ideas to clients much more graphically, quickly and comprehensively than by using tracing paper over a site plan. I would mention in passing that Corbusier's last book shows an appreciation of the use of air photographs in the presentation of planning proposals.

D

In this talk I have tried in a short time to cover a very wide subject, each branch of which is a matter for specialisation. I have been able to do no more than indicate some of the scope and potentialities of the use of air photography to the planner. In spite of its sketchiness I hope that I have perhaps given you some idea of the value and some encouragement to the further exploration of the uses of air photographs and their interpretation.

I should have liked to have been able to show on the screen some photographs of really outstanding architectural interest—the ancient culture of the Mediterranean or Mediæval and Renaissance Italy. Such photographs have been taken in great quantity, as well as cover of many wide areas in the United Kingdom, which would be of great practical value to many of us, but they are not available to the public. The slides I have shown have been loaned to me by Hunting Air Surveys, to whom I am greatly indebted. In Canada, on the other hand, there is a National Print Library of air photographs which contains a print of every photograph of Canada taken by the Royal Canadian Air Force and an index of every photograph taken by civilian air survey companies, to which the public have access and from which they can obtain copies at a reasonable charge. If I have stimulated enough interest in the use of air photographs in reconstruction and development, perhaps you will do all you can to urge that a similar institution be established in this country.

DISCUSSION

Extracts from Speeches

THE CHAIRMAN : I am sure we are all very grateful to Mr. Scarlett for covering so much ground in his paper. His closing remarks were the most important. As far as I know, there is no organisation in this country which can help planners by providing photographs from a central pool. You can go to the Ministries and ask for photographs, and you may or may not get them. I believe that my partner and myself were the first people to obtain air cover for a town for a planning scheme, and the Ministry of Town and Country Planning were hopeful that some system would be available so that anyone could obtain similar cover. That has not happened yet. I think it is essential that there should be an organisation of some kind to assist planners and to correct hopelessly out-of-date maps.

I was particularly interested in the fact that Mr. Scarlett stressed the ecological side of air photography. It enables us to check and to preserve a great deal that is essential in the outskirt planning of towns, and it helps to supplement the service utilisation maps which already exist. I was also very interested in the archæological side of the paper. The discoveries made by air photography have been vast, and many of them have still to be exploited. Whole towns have been shown up by the camera through crop markings. These sites must be protected for purposes of planning, and very often we are completely ignorant of their existence from the ground. For that reason the camera is an instrument which must be used adequately.

MR. M. HARTLAND THOMAS : It seems to be very well established that air surveys have a value in map making, and I should like to ask to how large a scale it is possible to go. I have the problem of surveying 50 to 60 factories which are scattered all over the United Kingdom. We lost all our plans and records in the " blitz " and we are beginning to struggle with ground surveys to get some kind of record plans. Would it be possible for air surveys to provide us with plans to, say, 1 : 32 scale of 1 : 400 or 1 : 500, which would be adequate for preliminary sketch designs for alterations? Would there be too much distortion at such a scale?

MR. FRANK SCARLETT : I should say that it is quite possible. Whether it could be done from existing cover I am uncertain, but there may be other people in the audience better qualified to answer that question.

MR. T. D. WEATHERHEAD : There would be no difficulty in producing maps to 1 : 500.

MR. RICHARD SUDELL : The author has said that contours can be shown within 2 ft. Is that so?

MR. FRANK SCARLETT : Yes, in a scale of 1 : 5,000.

MR. J. D. HOSSACK : I was very pleased indeed when I heard that Mr. Scarlett was to give this lecture, because in 1916 as a soldier I made my first acquaintance with the study of air photographs. I believe that it was Colonel Winterbottom who started the interpretation of photographs, having taken the idea from the French. In those days we worked with proportional compasses and converted to figures to a scale of a map, and then filled in the detail. It has been of great interest to me to-day to know what progress has been made and to see how the angles of the camera are checked down at certain heights, because in my time that was done in a very rough and ready way.

MR. FRANK SCARLETT : That is very interesting to me, because quite a technique was built up during the last war, and it was entirely lost. We started again from scratch at the beginning of this war.

MR. MAX LOCK : I have been told that there is a list of towns which have priority in the matter of complete air surveys. I think that all towns in this country will ultimately be covered by the Ordnance Survey Department. There is one way in which these air surveys have a certain amount of danger from the architect's point of view. If we read the Dudley Report and some advice issued recently by the Ministry of Town and Country Planning, it will be found that stress is laid on the need for architects to get away from the purely geometrical type of design which it is said can only be appreciated from the air. There is a danger of going up and taking photographs, and planning schemes from the air for clients who will only be able to appreciate them from the street. I should like to say, incidentally, that the layout which the author described as a good one is not, in my view, a good one at all!

MR. FRANK SCARLETT : I agree with everything the last speaker has said. With regard to the lay-out which he mentions, I only said that it was good by contrast with the preceding geometrical lay-out. I agree that there is a very great danger in thinking of things as patterns on a flat projection. One point about air surveying is that by stereoscopy it is possible to see the slopes of the ground, and by the study of old cities showing the way communities have evolved. I think there is no danger of drawing-board planning resulting from the proper use of air photographs.

MR. ROLF HELLBERG : During the latter part of the war I was connected with a research branch which was dealing with this particular aspect of photography, and I had about three or four architects working with me. We found out some very interesting things. The first was that the greatest value of air photographs is the fact that they provide a means of seeing the whole of an area in one piece, and of seeing it on a larger scale in detail. You can get a 6 in. focal length photograph which will cover a very large area, and which will show the communications for miles around and you can, of course, obtain a larger cover of the particular site in which you are interested. We tried to go even farther than that. For the benefit of the Ministry of Town and Country Planning, we attempted to identify the actual use to which buildings were being put in a town in England. It was a town which none of us had visited for 20 years, so we were not familiar with it. We found out some very interesting things. We found that it was possible to determine from the photographs the changes of use of certain buildings. It was obviously impossible to tell if the use of a building has been changed from floor to floor, say from a private residence into offices, but there are a great many indications to a trained interpreter of the uses to which buildings have been put. That, of course, was of use during the war, but it may also have a peace-time application.

When one looks at a building from the air, there are very often a number of associated features which are not in themselves of any great importance, but which may provide a clue to the existing use of that building. The north light roofing of industrial buildings very largely disguises the actual purpose for which the buildings are being used. But if you see a special form of square-shaped building near by you can be fairly sure that it is a factory for the assembly of aero engines, and that the particular building you are looking at is an engine test house. Associated features will often enable you to identify shops which have been converted from houses. A pavement extending to the front of the building may be an indication, or you may even see sunblinds.

I admit that the technique can be very dangerous in the hands of people who do not possess a certain amount of local knowledge. Mr. Scarlett will no doubt remember the amusement caused at one time by an attempt which was made to identify a peculiar type of compound in Norway. It turned out to be a silver fox farm. Unfortunately we had not realised that there were such things in the area and therefore we could not identify it. It is very true that the vertical photographs are the really important things to the architect. One speaker said that the architect must avoid pretty patterns. I think that anyone who has studied a great number of photographs would always avoid pretty patterns, such as are only to be seen from the air, because they would realise their futility. We found that obliques did, in fact, have one use in town identification, if taken at the same time the aircraft took vertical photographs, because the façades of buildings sometimes revealed changes of use not otherwise apparent. I do not say that towns can be surveyed entirely from the air. Air cover is only an ancillary to ground survey.

With reference to the identification of crops, it may be of interest if I tell you that the Americans have now flown, or are flying, over the entire country, photographing it at a scale of 1 : 10,000. They are taking photographs and sending to every farmer complete photographic cover of his farm, and they are marking on the maps which areas are to be developed by normal farming methods, which by contour ploughing, and those which are not to be developed except by afforestation. The importance of that can be readily appreciated and the speed with which it can be done with a certain amount of knowledge is quite obvious.

Miss J. Tyrwhitt : The author has suggested that air photography might encourage planning to a geometrical pattern, but I am wondering whether the converse might not operate. I think it is possible that air photography may reveal certain patterns which are not clear from the ground. I am thinking in particular of the patterns made by traffic. If we could get a clear picture of those, we might be able to appreciate the values of traffic junctions. It might be possible to see which areas have no traffic, and which have a great deal of traffic. Again, it might be useful in the identification of footpaths and tracks. I have been interested in seeing the deliberate tracks which people have made in some of the London squares. The tracks represent the short cuts which people wish to take, and they are clearly defined so that you get a new and functional pattern which is usually at variance with the original pattern. Another possible use of air photography might be to show whether gardens are used or not. That is a planner's problem and surveys have been carried out, but they have had very little value.

Another point I wish to raise is that of movement, and I do not know whether air photography could help from that point of view. At the moment traffic surveys are carried out with some difficulty, and I wondered whether the aeroplane could identify the movement of traffic and define street parking and direction. My final point refers to pedestrian movement. I was thinking in terms of pedestrian movement from congested places such as football grounds and theatres. There are also collections of people at certain times, as on market days. It might be possible, perhaps, to find out by aerial photography how people come to such a gathering place, from where they come and approximately how many people there are. I should very much like to know whether it is possible to use air photography for all these purposes.

Dr. V. Vafiatis : I have been very pleased to hear Mr. Scarlett's lecture, and I agree that in countries which have not a sufficient number of detailed maps air photography should be of great value. I am working in the Town and Country Planning Department of the Greek Ministry of Works, and we have used air photography a great deal. In Athens, air cover has been used for the first time, and in certain parts of my country we have covered certain towns six times. The photographs have been used with great success to obtain details for planning purposes. We have used them to find out how towns have developed and how they have become larger.

I should like to say something about the use we have made of these aerial photographs for traffic purposes. Using a scale of 1 : 12,000 or larger, it is possible to see what type of car is moving along a road. It is also possible to see the traffic which is moving and that which is stationary, which is very valuable. To make a traffic survey by the ordinary method of counting cars is extremely difficult, and we have found that the air photographs are more useful because they give a clearer indication of the whole of the traffic in a town.

Mr. G. H. Quarmby : I should like to know whether the author can give us any information as to whether any experiments have been made in the use of colour for air photographs and, if so, what difficulties have been experienced.

Mr. T. H. H. Hancock : I think I am right in saying that the whole of the country is being surveyed from the air by P.R.U., and that reconnaissance aircraft have been undertaking the task. The whole country is going to be done, I understand, on a scale of 1 : 10,000.

The Chairman : I have no doubt that the whole country has been covered during the war. The point is not so much whether the country has been covered, but what use we are going to make of that cover.

Mr. Rolf Hellberg : I do not know whether people realise how important it is that air cover should be of the right type, because it is possible to make very bad mistakes. For instance, in railway reconnaissance, peculiar effects may be obtained if the 'plane flies too low, and the wrong type of lens is used. It is obvious, therefore, that there are dangers in trying to be arbitrary as regards these photographs. It is most important for people to give the exact purpose for which they require the photographs, and they should not specify the scale. One speaker asked whether it was possible to take photographs to a scale of 1 : 32. The answer is that you can make the maps, but you cannot take the photographs to that scale. In view of the pressing need for this information for planners, I should like to stress the point that there should be a national photograph library. I think there is nothing more important to architects to-day than the establishment of such a library. I should like to see the R.I.B.A. take official action to try to get it established.

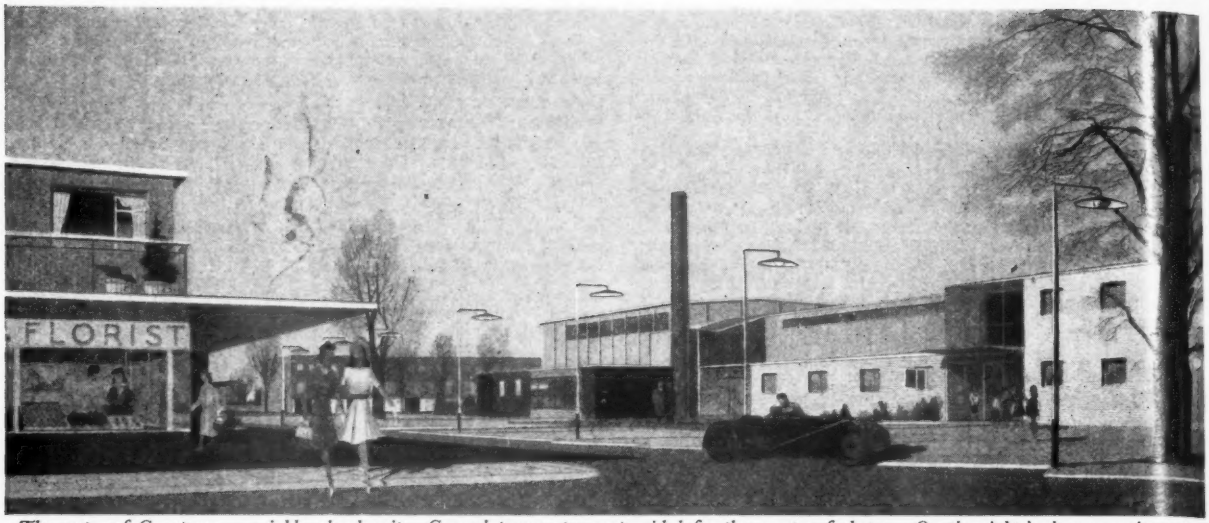
Mr. Frank Scarlett : With regard to the question of archæology, a great deal of air photography has been done in the Middle East which I think would reveal a good deal of information if examined from the archæological point of view. For example, there are photographs showing pre-dynastic and first dynasty tombs in the Nile valley, and many sites of great interest in Syria. Mr. Hellberg's remarks were extremely interesting, and I cannot add anything to them, except to his story another one of how a camel caravan was identified as a Panzer Division !

With regard to Miss Tyrwhitt's questions, I agree that it is possible to see the volume and flow of traffic from the air, and I think that that could be seen on some of the photographs which I showed. It is also quite easy to see any special congregations of people on special occasions. I think, however, that the great use of air photography in traffic surveying will be the effect of the simultaneity of survey achieved by it. You can take photographs at a certain time of day and see exactly how many cars are moving up and down a certain street, how many cars are parked, and so on. I do not think you can achieve simultaneity of survey by any other means. With regard to the question about gardens, I am not quite certain whether Miss Tyrwhitt meant whether gardens were used or whether they were properly kept. It is very often the case that gardens which are kept properly are those which are not used, and *vice versa*, but I think air photography could be used to gain information in this respect.

I am afraid that I know very little about colour photography. Experiments were made during the war, but I am not sure whether stereoscopy is effective with colour because there is a rim round the coloured photograph. With regard to the survey of the United Kingdom being made by P.R.U., I am very glad that that is being done, and I hope that members of this Institute will see the photographs. I should also be glad if this Institute had a library of air photographs showing the various towns of architectural interest in the United Kingdom. It would be of great value to students as well as to members of the Institute.

The Chairman : I should like to say one more word with regard to traffic, and that is that I have used air photography for checking traffic counts at cross-roads or traffic lights. It is possible to see the tracks of traffic on a concrete road, and the volume of traffic going in any one direction can be ascertained. The Town Planning Committee of this Institute has already taken certain steps to investigate the question of the availability of air photographs to planners. That is a matter which I think we shall follow up with considerable interest.

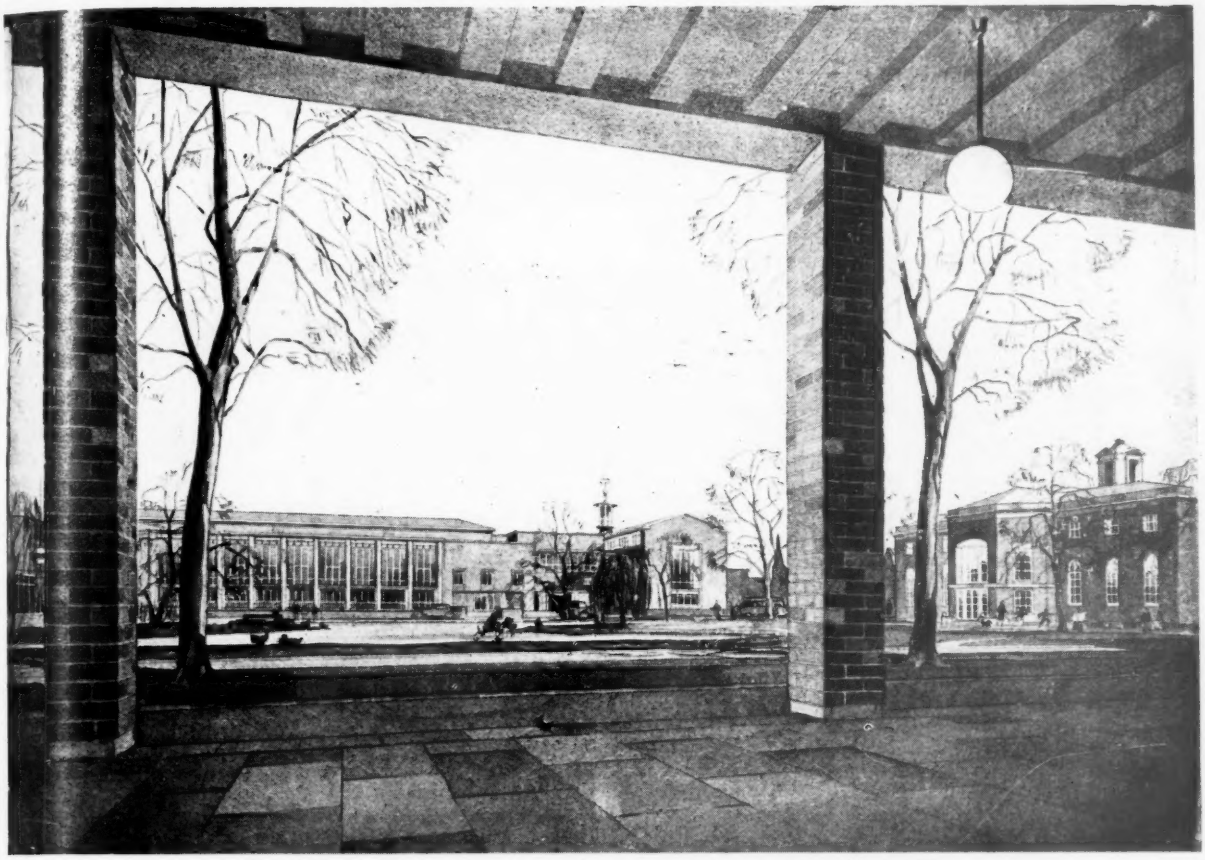
On behalf of the meeting I should like to propose a hearty vote of thanks to Mr. Scarlett for his paper.



The centre of Crosstown, a neighbourhood unit. Covered pavements are provided for the groups of shops. On the right is the community centre. Architect: Miss J. Ledeboer [A.].

The large-scale model of the replanned town centre. Architect: Mr. Dobson Chapman [L.]. The internal by-pass road and lakeside gardens are on the left. The large building in the centre is a new cinema with restaurant overlooking the lake.

The model of the industrial group. Architects: Messrs. F. R. S. Yorke [F.], E. Rosenberg and C. S. Mardall [A.]. The design suggests various types of factory, including a group of standard units divisible for letting.



The municipal buildings seen across the public gardens. Architect : Brian O'Rorke [F.].

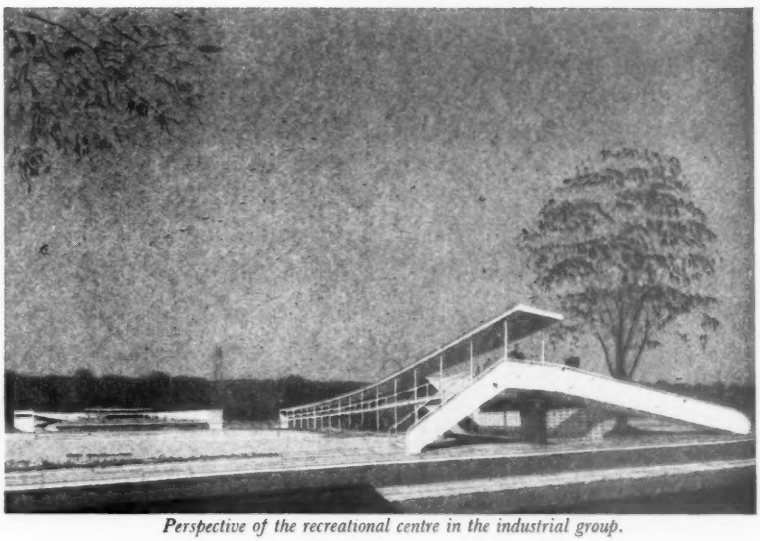
"YOUR TOWN" EXHIBITION AT THE R.I.B.A.

Selected Views of the Knutsford Re-Planning Scheme

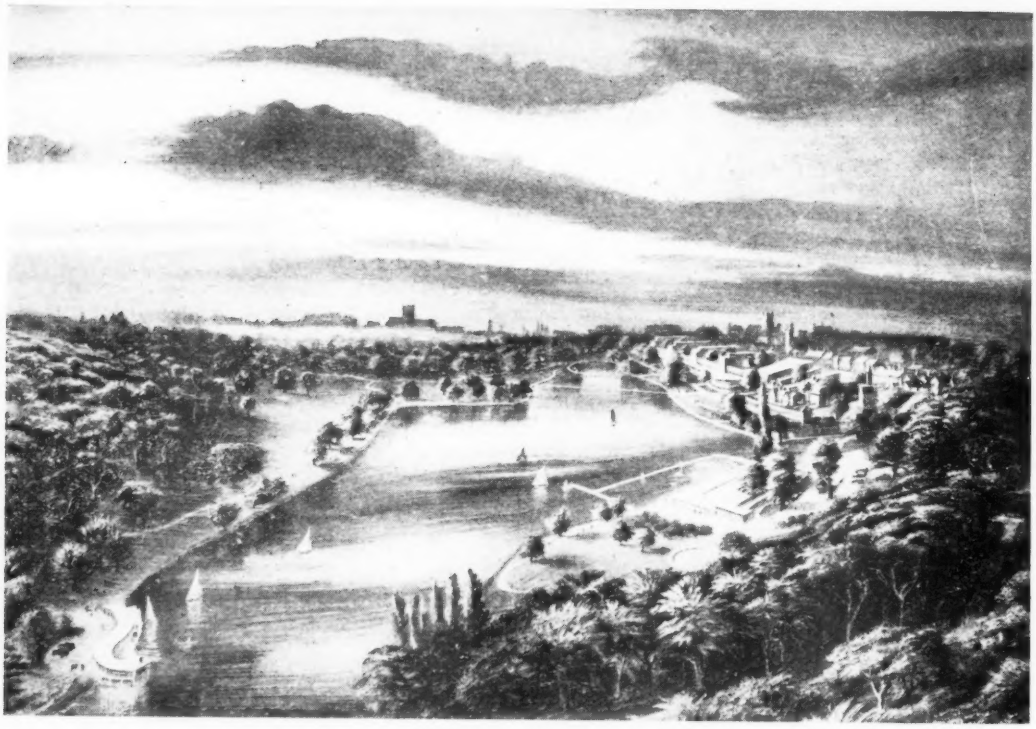
The Knutsford exhibition, now renamed "YOUR TOWN. A Plan for Expansion—the Knutsford example," was opened by the President at the R.I.B.A. on 4 June. The chairman was Mr. Bertram F. Crosfield, Joint Managing Director of the *News Chronicle* and the President and the Royal Institute were thanked on behalf of the sponsors by Mr. Gerald Barry [*Hon. A.*], Editor of the *News Chronicle*. A report of the proceedings will be published in the July number of the JOURNAL.

The exhibition is staged in the Foyer of the Henry Jarvis Hall, which has been transformed by constructing an entire inner shell of wall screens with a velarium over ; special lighting has also been installed.

The illustrations in this number are selected from the many perspectives which so ably tell the story, together with two additional photographs of models. . These supplement the particulars given in the April number of the JOURNAL. The exhibition closes on Friday, 5 July. Members in London should take the opportunity to see a most progressive town-planning scheme and an outstanding example of exhibition technique.



Perspective of the recreational centre in the industrial group.



Two views of the lake, Tatton Mere. The one above shows the town grouped round the head of the lake. The lower one is from the opposite direction and shows the lakeside gardens and promenade on the left, with the lido beyond.

OFFICE ORGANISATION

AN INFORMAL LECTURE DISCUSSION AT THE R.I.B.A. on TUESDAY, 30th APRIL, 1946

MR. J. MURRAY EASTON [*V.-P.*] in the Chair.

The CHAIRMAN: To-night, which is the first of a series of informal evenings for the discussion of Office Organisation, we are fortunate in having three speakers, Mr. Frederick Gibberd, who will speak on the medium size office; Mr. S. E. T. Cusdin, who will speak on the larger office; and Mr. Richard Henniker, who will speak on the small office.

We all agree that the object of organisation is not organisation for its own sake but to enable architecture to be carried out with the least posible interference. Before the slump in America, office organisation had got to be almost a menace. When one tried to find out what was happening in the matter of building one found that the draughtsman or designer knew so much, but could not say what materials would be used because that was the work of the specification writer. I do not believe any good architecture could come out of that kind of organisation and I am hoping to hear this evening how organisation can make for the best type of architecture.

Mr. FREDERICK GIBBERD [*F.*]: I should like to be able to tell you exactly what constitutes a medium size office but I am afraid I cannot. My personal view is that the size of a medium office is the amount of work the principal himself can design. I realise that that will not do as a definition because some principals do not do any designing at all, but I have always felt that personal design is the most valuable of the services given by the architect to his client. Of course, I am a reactionary. I believe that art is much more important than science; so I feel that when the principal has as much design work as he himself can do he should definitely refuse work. I know quite a few architects who have medium size offices who refuse work because they are afraid they will grow into large organisations.

One man doing all the work he could reasonably do should be able to function with an efficient staff of about fifteen people. In order that the principal shall have time to design, it is necessary that he ration his time spent on interviewing, meetings and doing the sort of thing I am doing now. He has to reserve certain days each week exclusively for the drawing board. I do not want to give the impression that I think the principal should spend his time doing perspective sketches with a 3B pencil and handing them out to the staff all round him. By the word "design" I mean design from the aspects of construction and function. In other words, one has to get to know the problem and the various constructional systems with which one is dealing. On the other hand I do not wish to suggest that no one else in the office should design. Most of the senior members of the staff are designing as they work out their problems.

"Of course I am reactionary"

With regard to the staff structure of the medium size office, this is made up of the principal, the manager, chief assistants, draughtsmen and the secretarial side. The principal is responsible for getting work, he is responsible for design and the general direction of the office. The manager is responsible for seeing that the work is carried out, dealing with the staff — both drawing office and secretarial — and he should know everything that the principal knows. The chief assistants are responsible personally for carrying out particular jobs. Each assistant is generally a specialist in some particular building type; one may know a lot about theatres, another housing and another industrial design, and I think it is desirable also that assistants should be competent to deal with clients direct and not through the principal. The draughtsmen are attached to individual assistants. The secretarial side consists of the personal secretary to the principal, the typist who deals with the general typing, filing and that sort of thing and, last of all, the office boy who is learning how to draw and who will one day most certainly be an architect. He files drawings, keeps stock of materials and runs errands, etc. This is not a sort of pyramid structure but a series of teams which have particular jobs for which they are each equally responsible.

"The chief assistants are responsible personally for carrying out particular jobs"

You will notice that I have not included any specialists. I do not think it is financially possible for the medium size office to have on its staff a structural engineer or a heating or lighting engineer. I do not know what the solution is to this specialist advice when the client will not pay for it. Personally, we ask advice of various specialists who are friends of ours. We always go to the same people and I do not think it is more expensive than trying to do it yourself in the office. In the long run I think it is definitely cheaper and certainly much more efficient. I do know of one architect who has all his drainage schemes worked out by a specialist and he is certain it is cheaper in the long run.

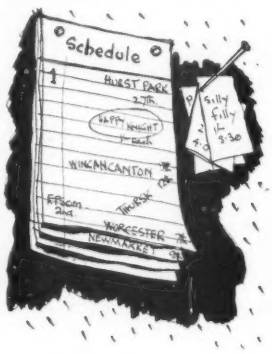
Regarding the type of work in the medium size office, I think it is necessary to specialise a little, but only a little, otherwise if you become too much of a specialist you will be at the mercy of trade fluctuations or at the mercy of a particular client. I had one particular run where I had some large buildings for one man and he gave me, to put it bluntly, quite a lousy time. Now I have three good clients and I can always say: "If you will not accept this design then I must resign," but if you have one organisation hinged on one particular client, obviously you have to think many times before you say: "No, I am going to do this" if you feel you must do it a certain way, as you often do on matters of design. I think to specialise in widely different building types is an advantage, because that brings you into contact with quite different types of clients, and obviously when you get a slack period on one type of building the other types will help to keep the balance in the office.

I think apart from getting a name for particular types of building, it is a good practice to pursue other trades allied to architecture. For example, an architectural training is the best available for industrial design. I see no difference between designing a teapot and a town hall; all you have to learn is the function, the materials and constructional methods. The art will be instinctive and, financially, it certainly pays very well.

Other activities that one might pursue are town planning and landscape architecture and, of course, surveying. I worked in an office where the rent was paid almost entirely on schedules of dilapidations.

Now I come to the organisation of work. My particular office is run to a sort of progress schedule, which is a large sheet of paper divided up vertically into days for the period of one month. Alongside are the names of the jobs and then reading across the columns we fill in the progress on a job as we make it. At the beginning of the column are the name and initials of the person dealing with it, and each week there is a discussion between the man in charge of the job, the manager and the principal, and the job is planned ahead. We note on the schedule what we are going to do and mark it off as we do it. We also record on the schedule any meetings which are held and any drawings which are prepared so we can see the position of any job in the office. This schedule is stuck up in the office so that anyone can see how far a particular job has progressed.

Apart from this weekly meeting we also have a monthly discussion in the office on general matters. The idea is to get everyone together so that each member of the staff can have his say in the running of the office. Various matters are discussed. It may be the presentation of a drawing, and when it is finally agreed, it is typed out and put into a little book which has the pompous title of "Office Routine Book." My office has just decided that they are not going to work on Saturdays any more—a decision in which I was a minority— but they assure me they will work very much harder, so they are trying it.



"... a sort of progress schedule"

Then we have what we call job history. Each job of any size has a box file in which is recorded everything that takes place, which helps to plan the job. In the front there is a diary and each week we write down what we are doing. There is a list of work that has to be done and as it is done it is ticked off. It also contains schedules and specification notes, and contains all the odd costs one obtains when a bill of quantities is being prepared. At the bottom of the file we have general data. The idea is that this file shall be a sort of brain so that if anyone is ill the job does not go down the drain ; you can go to the file and find out what is going on and how the job can be taken over and carried on.

With regard to drawings, we work to three standard drawing sizes and if it means a bit of extra photo printing we do not mind. I am always amazed at the amount of time that can be wasted in just handling drawings. We have a standard method of presenting drawings and a standard method of draughtsmanship. I think it is desirable that one's work should have character on paper and I feel that the only way to get it is to ask everyone to pool their skill, and get a common method of lettering and common method of putting dimensions or a north point so that no one is able to tell who prepared a certain drawing. We are trying to extend this information sheet by including general information which one is always wanting, such as window size and so on. The drawings themselves are numbered, initialed, checked and dated.

I think it is worth mentioning the storage of drawings. I am certain that the only way to keep negatives is in the plan chest, preferably made of metal, and they should only be taken out when they are required for printing. Every negative is immediately printed, the prints done up into bundles and kept in flat portfolios which go in shelves. This keeps them flat, whereas if they are put into the ordinary drawer they curl up. We also keep sub-contractors' drawings in portfolios when the job is over. The prints are destroyed and the negatives are stored in metal tubes. Revisions that are made are, of course, marked on the print in the usual way and we bring the negatives up to date at intervals.

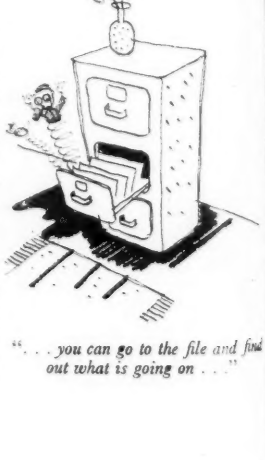
We have a standard office detail, that is, a series of drawings showing equipment or systems of construction such as copings, doors, etc., which have been designed and issued for each job. I think it is better to have a standard detail and push it out to jobs which are suitable. It saves time and gives the work a certain amount of cohesion.

A thing I have found most useful is a data file. It is a foolscap metal filing cabinet which is divided up into various headings such as materials, lighting, heating, sanitation, doors, windows, electrical equipment and so on. It consists of a series of folders, each folder having a reference number, title and sub-title, so if you want light fittings you look under lighting, then you find the sub-heading which enables you to put your hand on the folder dealing with electric light fittings. Then there is also a folder for each manufacturer so that when data comes into the office, instead of finding its way into the waste paper basket or, what is perhaps worse, on to a shelf only to be forgotten, all the manufacturers' blurb is torn out and the data is put in the folder. We also have box files for various types of buildings. We have one for commercial buildings, another for flats and so forth, and each one is sub-divided into different types, which enables us to look up any particular job that has been done.

On the secretarial side the subject which I think needs most mention is that of correspondence, because I have found that this can get all over the place. How often has a lost letter been hunted only to be found under somebody's drawing board? I think the simplest way is for the secretary to open the letters in the morning, stamp and date them and put them on the principal's desk. After the principal has looked through them the manager can collect them and distribute to all concerned. If the principal does not turn up, the letters are still distributed. The person dealing with a particular letter initials it after he has replied to it, so that when the secretary looks at them, she can file them if they are initialed, or chase up the person concerned if one is not initialed. By that method there is a check on all correspondence.

Another very useful thing we have are standard specification clauses and standard methods of presentation. Similarly we have standard methods for reports which are filed in different coloured folders. Standard colours and colour schedules have also been found to be of great assistance. We get the manufacturer to supply us with tinted pieces of paper which we cut up into foolscap size. We then cut them into thin strips which are pasted on to a piece of paper and against each colour we type where it is going to be.

In conclusion I would like to stress that I have been giving a very personal view of the organisation of one particular office. There are, of course, all kinds of ways of running the medium size office and I look forward to hearing about some of them in the discussion.



"... you can go to the file and find out what is going on ..."

Mr. S. E. T. Cusdin [*A.*]: When I was invited to take part in tonight's meeting I was under the illusion that architects, who, by virtue of their profession, should be organisers by any other name, would have freely committed their views to print and that I might carry out a wide survey of the subject to augment my own experience. I am dismayed, however, to find relatively little has been published which covers this essential part of an architect's practice. You have heard from Mr. Frederick Gibberd a concise and lucid statement on how to

organised medium office. My part in this conspiracy to promote a discussion on this important subject will be to propound what has to be organised in a large office. In the short time at my disposal I shall confine myself to the broad and general considerations.

I propose to consider the position of offices whose work, either in the size of a particular job, or the number of jobs to be completed in a given time, is beyond the design capacity of the principal—the state of affairs which arises when several units of the size of a medium office are merged. It is perhaps fortunate that there can only be very few cases where an organisation of this size has to be created *de novo* and that in most cases a basic organisation exists which is expanded to suit the particular requirements of the larger unit. I have examined the organisation of several large offices and have found that there is a great diversity of arrangement, but that there are certain essentials which are common to all.

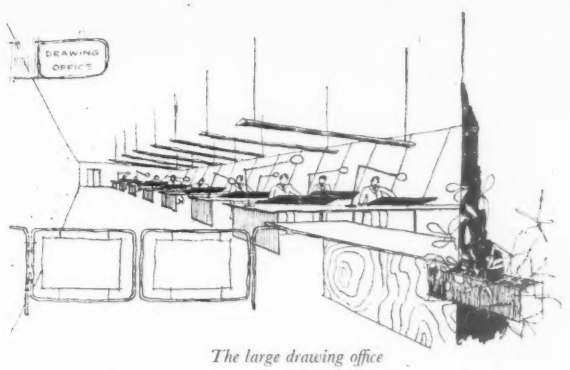
I have categorised under twelve main headings the aspects of a practice which have to be organised—the "Schedule of Accommodation" as it were for the plan we have to study.

1. Negotiations with clients, lawyers, adjoining owners, local authorities and Government Ministries, builders and contractors.
2. Surveying of sites.
3. Preparation of designs, reports—including investigation into costs—and advice on procedure.
4. Consultations with specialists, consulting architects, landscape architects, town planners and engineers.
5. Preparation of working drawings, specifications, bills of quantities, contracts, sub-contracts, and schedules of dilapidations.
6. Progressing of each stage of all work.
7. Supervision of work in progress.
8. Administration of secretarial, business, technical, surveying and drawing staffs; selection and planning of office accommodation.
9. Control of finances.
10. Promotion of study of special problems and distribution of information to staff.
11. Consideration of methods of providing against any negligence on the part of any of the staff.
12. Devotion to professional duties to R.I.B.A. and other official organisations including the provision in the office for students during vacations. (Perhaps it is a great pity that a number of clients do not realise the extent of an architect's responsibilities.)

It is unfortunate that no original research exists which gives any statistical information on the relative importance or value or different man-hours which each of these aspects absorbs in the practice. Any student with an urge for organisation will find in this subject a useful field of study. Even if it were possible to do so, to quote figures for a particular organisation would be so grossly misleading as to be valueless.

It is now necessary to consider what the organisation is for, its main aims and intentions. In a private practice the establishment of an effective policy is perhaps the most difficult to define. In an official organisation such as a County Council this decision is made by the county authorities, but the private architect is faced with many alternatives—to specialise in one type of building, hospitals, schools, housing, or to take any type of job of any size from a town to Aunt Agatha's garage. As a result it will be obvious that a decision to specialise in, say, housing would require a different organisation to a practice devoted to more general subjects. It is usually a negative type of decision which has to be made because the type of work may not always be known, but it is possible to know what type of work to reject. This decision is one to be made by the principals, who will also be responsible for organising the practice in such a way as to maintain the main aims and intentions.

Then it is necessary for the principals to choose what aspects, if any, they will control. An obvious choice is that they will control directly those aspects at which they are most efficient, and



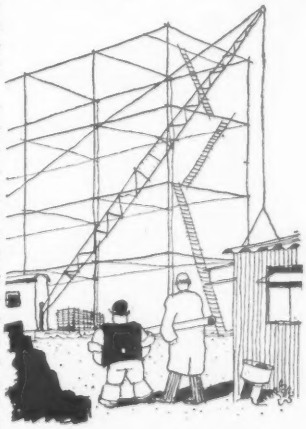
The large drawing office

delegate the control of those aspects beyond their capacity to deputies. For example, it would be tragic waste of rare talents for an efficient and able designer to control the administration of secretarial and business staff and vice versa. The utmost care must be taken to ensure the selection of a deputy who can be entrusted to undertake, in perfect harmony with the principals, those aspects delegated by the directors.

We have considered what to organise and for what we are organised. We can now consider any other factors which have to be studied to turn our organisation into an effective body. It is of paramount importance to realise that whatever the form the organisation takes it is not the prettiest scheme on paper that counts but the talents, character, temperament and welfare of all the members of the firm which must dictate the pattern, and for this reason alone the structure must be flexible and permit of changes with the least possible disturbance to the plan as a whole. If I am dogmatic about this it is the result of much patient and wise counselling of my own principals to which I am now wholly converted.

Another contributory feature in efficient organisation is the appointment of a permanent nucleus staff of business, surveying, designing and engineering—men or women who are considered as an essential part of the firm, who participate equally in its fortunes (and misfortunes), who are given responsibility for the execution of well-defined duties and for promoting a sense of stable and steady progress and improvement in certain aspects of the work, who can interpret a broad direction into a detailed instruction for the effective execution of the work.

The movement of the temporary staff should be properly controlled to prevent any member stagnating when he reaches his ceiling and for whom no vacancy exists on the permanent staff. This control is naturally for the mutual benefit of the individual and the firm. Care should be taken on the other hand to nurse promising members for specific places in the firm.



"*Supervision of work in progress.*"

Time only permits me to make a passing reference to the arguments for the retention on the staff of fully qualified surveyors, structural engineers, mechanical engineers and quantity surveyors. There is ample evidence for a more general adoption of the principle of the firm being in a position to carry out the whole of the commission on behalf of a building owner. I believe it is generally rejected on grounds of the additional responsibility such undertaking throws on to the already over-

burdened architects, and the fears of inevitable cycles when there is not sufficient work to retain those specialists. There is not any basic level at which you can say the amount of work in the office or the turnover in the office makes it economical to retain any one of these specialists.

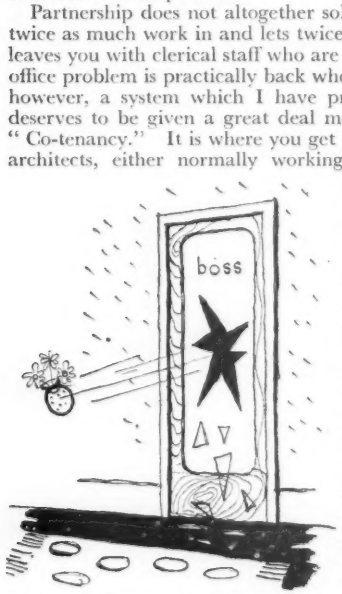
Thus in general terms I have alluded to the aspects of a large office to be organised, that it should be organised for a well-defined purpose and to factors which contribute to its effective working. It now only remains for me to tell you that as architects you are all capable of organising a large office, and if any of you are in any doubt or are disappointed that I have not produced the ideal organisation to refer you to three admirable works. They are as follows :—*Architectural Office Administration* by Francis Lorne ; *Information Book of Sir John Burnet Tait & Lorne* ; and *Architectural Practice and Procedure* by Hamilton H. Turner.

Mr. RICHARD HENNIKER [*A.*] : I am in some slight difficulty because the small office essentially does not differ from the medium-size office except that it is a little smaller! The principles involved are exactly the same. Therefore, I feel I can employ our time more profitably by tracing the small office from the time of its inception.

Small offices have a habit of " happening " quite suddenly. The architect has one or two jobs in hand and the promise of one or two more—the promise perhaps having more substance if the person concerned knew the architect was practising on his own—and off he goes. The net result is that frequently the small office grows up in a night without any real organisation behind it at all. It is hastily improvised, so I want to stress this evening the necessity for the preliminary plan to be ready before the practice is started.

Unfortunately in the architectural schools there is a surprising lack of training of any sort in office management. There is very little information given to students as to what the practice, in the real fundamental sense of the practice of architecture, really means. When one first starts in practice the initial problem always come up against is two-fold. First of all there is clerical assistance and, secondly, accommodation. As far as clerical assistance is concerned, you invariably find that you require somebody to answer the telephone, yet you have not got a full day's work for the girl, and with regard to accommodation, it is almost invariably too large at first or the right size at first and not large enough to grow. I want to deal with possible solutions to that problem.

Partnership does not altogether solve it. Potentially it brings twice as much work in and lets twice as much work out. It still leaves you with clerical staff who are not fully occupied and your office problem is practically back where it was before. There is, however, a system which I have practised and which I think deserves to be given a great deal more trial. It is what I call " Co-tenancy." It is where you get two, three, four or even five architects, either normally working independently or one or more in partnership—it does not matter—who share an office, clerical assistance, telephone and, if necessary, assistants. It is a system which can be run at the most remarkably low overhead costs, which, when one first starts in practice, is always a very definite consideration. I can quote from experience that in running a co-tenancy office varying between three and five (mostly four) architects all in independent practice, the overheads, excluding the cost of draughtsmen, were down to as low as £100 a year to each of the co-tenants, which, I think, will take quite a lot of beating. One competent secretary, whom you can then afford to pay, can cope with four or five architects. I can hear one or two people saying : " Yes, but you will have your moments of rush work." Well, you have them in every office, but a few days of rush now and then are far more economical than the many days of slackness.



"... *the fortunes and misfortunes* ..."

The small office

When one starts in an office there are certain basic records which have to be kept and I want briefly to run through them. You have a bank account, a petty cash account and a memorandum or expenses account—an account in which you will jot down the things you will pay out of your own pocket. You will probably run a postage account—a document which is very useful for finding out when a letter was sent out, etc.—you will require a job expense and fees account, a sort of ledger which on one side shows the expenses chargeable to a job and on the other side what fees you receive for it, and you will have a printing account. You will also have a telephone account on which calls, usually other than local calls, are recorded. If you run a car and use it for work you will have a car account as well. Very few people seem to keep a car account, and I am surprised at the number of architects who seem to make some mystic arrangement with the income-tax people and get something off! I did that for a long time but now I keep detailed records and get a good deal more off ! You will also require a drawing register. I remember once before when I suggested this, somebody said : " A drawing register ? What do I want a drawing register for." I said : " Surely you keep a note of your drawings, do you not ? " and he replied : " Yes, I keep it on a piece of paper." " Well," I said, " there is your drawing register."

You will have a catalogue index of some sort, and you heard from Mr. Gibberd one method by which he deals with catalogues. I am afraid I am not quite as ruthless as that ; I adopt the vertical steel filing cabinet system with numbered folders into which the catalogues are placed when received. However, some basic form of catalogue filing will be necessary. An important point concerning catalogues is to make sure they are date-stamped when they are received in the office. Nothing is more infuriating than not knowing the date of the catalogue. In fact, I encourage travellers to come in and check through the catalogues under their firm's name and see that they are up to date. A technical record file of some sort will also probably be required and you may even have a reference library.

If you are running a co-tenancy scheme as suggested you will have one or two extra accounts. You will have a co-tenancy banking account, a co-tenancy petty cash account, which will replace the individual petty cash accounts, a co-tenancy postage account, which will likewise replace the individual accounts, and co-tenants' individual ledgers in which the secretary will keep the balance of the individual co-tenants. That gives you some idea of the routine work which is involved in some degree when an office is started up. I want to put in a plea to any of those here to-night who have not started an office but who one day will do so, to make sure they have an idea of how they are going to do each one of those things before they start. If you decide to have auditors to audit your accounts—and they are most useful people—you will find that they are worth their weight in gold in telling you how to start off all your office book-keeping.

As the office grows the necessity for assistants will become apparent. One usually starts in a small way, and I think quite a number of people get students, either still at school or straight from school. In this connection I would stress one matter. Do not despise students. They are capable of some first-class work, but I admit they are the slowest draughtsmen that ever happened. The first thing students have to learn is speed of draughtsmanship, and the finest way of learning it is in the small office, because in the small office everything that goes on can be seen, and there is the sense of urgency to get a job out of the way and the next one started. I am convinced that one of the finest insights into architectural practice that a student can get is in the small office.

With regard to drafting, I have a standard rule of never completing one-eighth inch drawings until they are out in pencil draft; similarly no half-inch is ever finished until the full sizes are roughed out. This is absolutely invaluable in keeping output of drawings up to date and stopping amendments which are a bugbear in any office, particularly in the small office.

We never waste time working on linen. If you want linen prints or negatives it is far cheaper to have them taken off by your printer, yet there are people still working on linen.

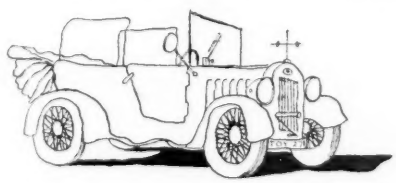
I now come to the question of partnerships. The architect is essentially a trinity—equal and indivisible. On the one hand he is a designer and planner, which, I am afraid, is all too frequently over-stressed. He is also the constructor both in the sense of the stability of the building and also in the sense of choice of materials. Lastly, he is the organiser and administrator. He is the business head and the head of the building industry. When choosing a partner always bear in mind that if you are weak in any one of those factors, make sure your partner is not.

Finally, I would once again stress the importance of organisation in an office and I should like to do so by telling you a story which I think has got a moral. The proud new owner of a house asked his friend round to see it. When the friend got inside the front hall he started sniffing and said: "I say, old man, you have a most frightful smell here," to which the proud owner, shaking his head sadly, replied: "Yes, I know." "Well," said the friend, "what have you done about it? Is it the drains?" "No," replied the owner, "we have no drains; it is a new house." If you look upon office organisation as the drains in an architect's practice—well, if you leave them out I think you will soon have the smell!

Discussion

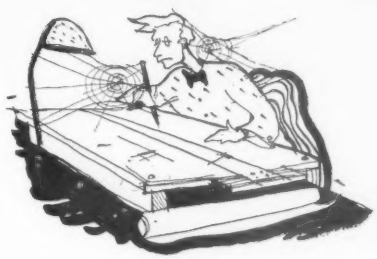
A SPEAKER: With regard to Mr. Henniker's statement concerning the difficulties in coping with the growth of an office, I found that the solution was to build an office on a nice piece of land, preferably outside London, and add to it as and when it was necessary.

A SPEAKER: I should like to say how very much I have appreciated what has been said by the experienced architects who have spoken this evening. In running an office we have found that a form which is sent to the Clerk of Works, on which he records the normal things which we want the Clerk of Works to record, such as progress on the site, weather conditions, delays, number of men and so on, should also record in a frank and fearless way what drawings he requires, what details he requires, what delays he has encountered and what delays he anticipates. I do feel that in running the job, the man on the site, who has day-to-day and hour-to-hour contact, is probably more able than the architect and the assistant, who are tied up with all the pettifogging details, to look ahead and try and iron out delays. In my medium-size office we have found that to be a very great asset and I can certainly commend it to you.



"If you run an office car . . ."

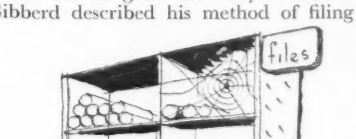
A SPEAKER: What I have found to be very useful in the various offices which I have been in is the use of time allocation sheets on which each assistant at the end of the day records the time spent on his various jobs. This information goes into the costing ledger and when the fees are sent out it is then possible to look up the book and find out exactly what the outlay in the architect's and draughtsmen's time has been. It can be seen whether a certain type of job is paying or not.



"Students are the slowest draughtsmen . . ."

Another point concerns the question of filing drawings, correspondence, etc. Firstly, there is the difficulty of referencing them. There are various systems, some complicated and others merely entailing giving the job a name. I have been in offices where each job was given a work number and everything was filed under that system, but I do not think that is the perfect method.

The second great difficulty is that of filing old plans. Mr. Gibberd described his method of filing plans, but I feel that what he said referred to current plans in use. We come up against the difficulty of plans perhaps twenty years old, and in a medium-size office you will have thousands of drawings; you cannot file them flat or in steel drums.



"the 199th or 200th you pull out . . ."

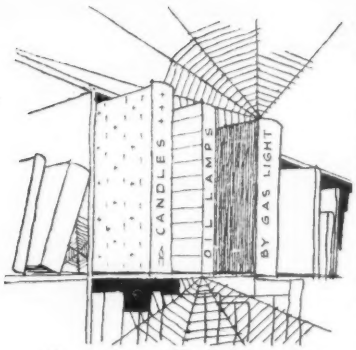
With regard to students in the office, the first office I was in was one where the students were purely and simply draughtsmen. They had no idea of how the office was run, got no chance to take responsibility, did not learn very much and did not become useful assistants. The second office I joined was precisely the opposite. The students were given a great degree of responsibility but subject, of course, to supervision. In that office they became really useful assistants and architects who could go out into private practice and have idea as to how to start a practice.

Mr. GIBBERD: With reference to this question of storing plans, I am certain the simplest and most efficient way is to destroy every drawing and put the negatives in a steel tube. You get about 200 drawings in a 6 in. diameter tube, and if they are placed on racks you will find you can get thousands of drawings into a small space.

The SPEAKER: With that method of having 200 drawings in a 6 in. diameter tube, I think if you have occasion to go to the tube to get one you will probably find that it is the 199th or 200th you pull out to look at.

A SPEAKER: There is one thing that might solve the problem and that is by the use of a small camera. Some firms I know have every sheet of their ledgers photographed, and if any particular item is wanted they simply refer to the reel of film. Perhaps the same method could be applied to drawings.

The CHAIRMAN: On this question of filing drawings, we have for a good many years adopted the principle of putting them all in flat portfolios. They do not take up much space and they are much less infuriating than rolled drawings. We have tried a



"... *catalogues of light fittings* ..."

great many methods but have always gone back to that particular way.

A SPEAKER : About ten years ago we were faced with this problem, and we had a large supply of manilla envelopes made. They are nothing like so expensive as portfolios but they serve the same purpose. We had a cupboard made to take three in a rack. Every job in the office is given a serial number and when the job is cleared the envelope is given the same serial number as the job. They are filed from one upwards. It means that if you have a 20 in. by 30 in. envelope you have to fold the drawing in half, but that does not matter. It does not take up much room and it is very quick, because you have only to look up the serial number which is on the envelope and the serial number on the steel filing cabinet.

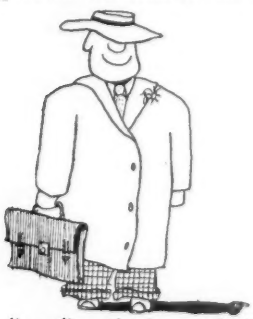
The CHAIRMAN : That is actually what I meant by portfolio—the large size manilla folder. We had them made specially and they have been worth their weight in gold.

A SPEAKER : I should like to ask Mr. Gibberd if he can tell us by what method he ensures that all the staff manage to get all the information, if possible before it goes into the data file. Has he any special method of doing that or do they just not know ?

Mr. GIBBERD : They do not know. The stuff comes in and it is filed by the particular person in charge of that data, and you only discover what is in there when you go and look under that particular subject. It is not circulated round the office, but I think that might be a desirable thing to do.

A SPEAKER : I think all three speakers have referred to filing and the indexing of technical information. I do not think any of them have explained what the organisation is for collecting this. There seems to be undue reliance placed on travellers who come in, but in these days that would appear to be a very haphazard way of keeping abreast with developments. I wonder if any of the speakers have some method they have not mentioned of making sure that their offices keep abreast of technical developments ?

Mr. HENNIKER : I think the answer to that is that the problem is different according to the size of the office. I can only speak as to the very small office having at the most four draughtsmen, and there I do my own selecting of material and that sort of thing. The first thing which I impress on any person who comes into my office, particularly students, is the fact that the practice of an architect has got so fast that the less they try to carry in their heads the better. To go and get the information is the answer. Therefore, I encourage them whenever they have a particular problem to discuss it with me, whether it refers to anything we are doing in the office or not. If I have not got anything in my own files of interest to give them, they have usually managed to stimulate my interest with the result that I come up to this library and do a bit of quiet devilling. It is a good way of building up their technical information.



"... *reliance placed on travellers*"

Mr. GIBBERD : One of the best ways of keeping up to date technically is to take the architectural and building papers, all of which contain abstracts from various Government reports. You can see from the abstract whether it is going to be useful, and if so, you write for that report.

In talking about my data file, this contains not just manufacturers' catalogues but any technical data on various subjects. For example, under the heading " Lighting," it begins with the subject of Light, then it goes on to various technical sub-headings and only ends up with actual articles and catalogues.

A SPEAKER : There is probably a great deal too much space given to catalogues of light fittings and so forth in an architect's office. All that is necessary is to get the catalogue to which you wish to refer when the occasion arises, use it on the job, then throw it away and get the traveller to bring another one round when he calls.

Mr. HENNIKER : I would support you to this extent that I find it necessary to go through the catalogue file every three months and throw out stuff to which I never refer and which is taking up space. I was interested to see that the British Standards Institution are working on a standard size for trade catalogues.

Mr. CUSDIN : Of course, a most valuable source of information on both technical and design subjects is the various journals.

A SPEAKER : For anyone building up a library of technical information I might draw attention to the small slip in *Building*, which only requires to be sent to the editor. On receipt of that slip, catalogues and so forth will be sent to you without delay.

"... *and injures himself* ..."

A SPEAKER : No reference has been made to *Building Science Abstracts* which really does not surprise me because I believe the circulation is only about one thousand. However, if I may take the opportunity of drawing attention to it, I should say that this extremely valuable publication is well worthy of consideration.

A SPEAKER : I do not know whether it is relevant to discuss this matter now, but if an assistant has an accident in the course of his duty and injures himself, what is the principal's liability ? Should he insure his staff under Employer's Liability ?

The CHAIRMAN : That is, I think, a little off the main lines of this discussion, but I think most offices do in fact insure their assistants. That is probably part of the secretarial organisation.

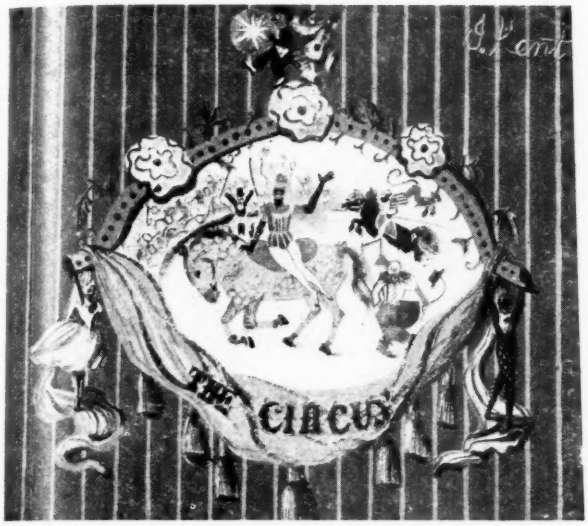
A SPEAKER : We have heard a bit about the filing of drawings and records. I did omit, however, to make reference to an extremely valuable record that can be kept by progress photographs which I would commend to you for a job of any size. If the job is going on for six, nine, or twelve months at a time and possibly at the end, due to various conditions, you get rather a sticky claim from the contractor, if you have got a record photograph—which should of course be dated—you will realise how valuable it is. In this connection I would suggest that you not only put the name and address of the photographer on the record, but that you also make a note as to who has the copyright and who keeps the negatives. We had a terrific job in getting photographs out of the architectural profession when we wanted them in connection with the " Building Now " Exhibition. When we did get them, a considerable number of architects could not tell us who took them.

I should also like to stress the point about good photographs. Some photographs sent in to the Exhibition were taken with scaffolds or planks still in the rooms, and they are not the kind that any editor would want to include. I would suggest that photographs should be of the first quality.

The CHAIRMAN : I had hoped that somebody would refer to the law, with which I think every architect starting in practice should acquaint himself. One does not want any litigation, but it is very comforting if you are in trouble to know where you stand. Common Law, and particularly the Law of Copyright, are very important for the architect opening an office, and there are one or two books on the subject together with the examples in the JOURNAL dealt with by Mr. Woodward.

THE POLYTECHNIC SCHOOL OF ARCHITECTURE

EXHIBITION OF STUDENTS' WORK AT THE R.I.B.A.



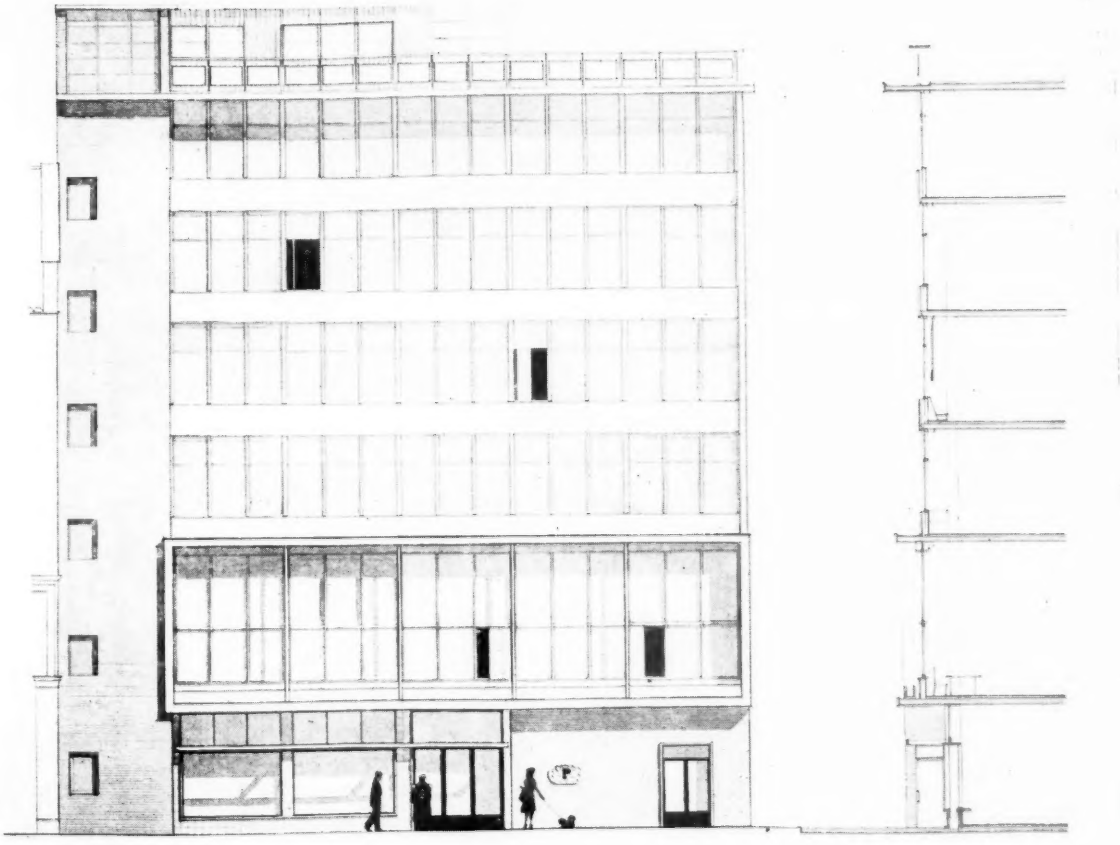
The photographs on the next four pages are selected from the exhibition, opened by the President, Sir Percy Thomas, on 4 June in the Henry Florence Hall. The chairman at the opening ceremony was Viscount Hailsham, vice-President of the Polytechnic. A vote of thanks to the President was moved by Mr. A. B. Knapp-Fisher [*F.*], Chairman of the Board of Architectural Education. A vote of thanks to Viscount Hailsham was moved by Mr. Sydney Tatchell [*F.*], Chairman of the Architects' Registration Council of the United Kingdom. Speeches will be reported in the July number of the JOURNAL.

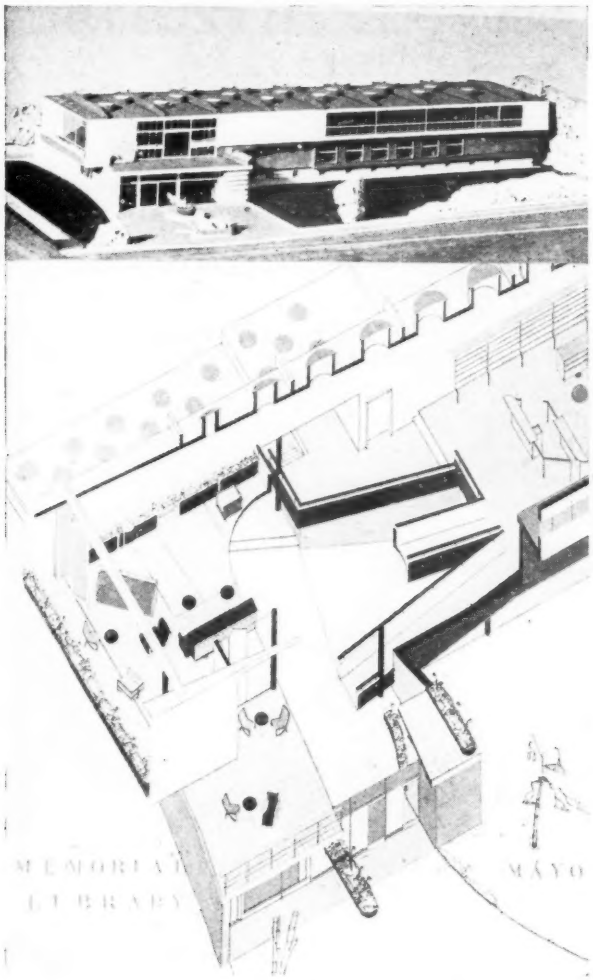
The exhibition was designed to show the best work of the school during the last two or three years. In common with that of other schools of architecture, the work in the senior years has suffered from the call-up of students to national service. Also much of the work shown was produced under constant threat of air attack. Many were the visits to shelter on the near approach of a flying bomb. Nevertheless, it is noteworthy that the staff and students of both day and evening courses worked with surprising regularity.

The drawings on view disposed of the common belief that the Polytechnic School produces good architectural assistants and

[*Continued on page 336*

LEFT. *Sketch design by Irene Kent, Fourth-Year Diploma Course.* BELOW, *A city restaurant building by Mary Francis, Fourth-Year Diploma Course*

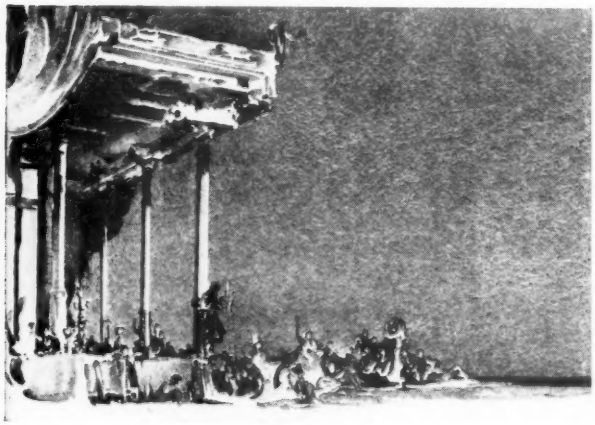


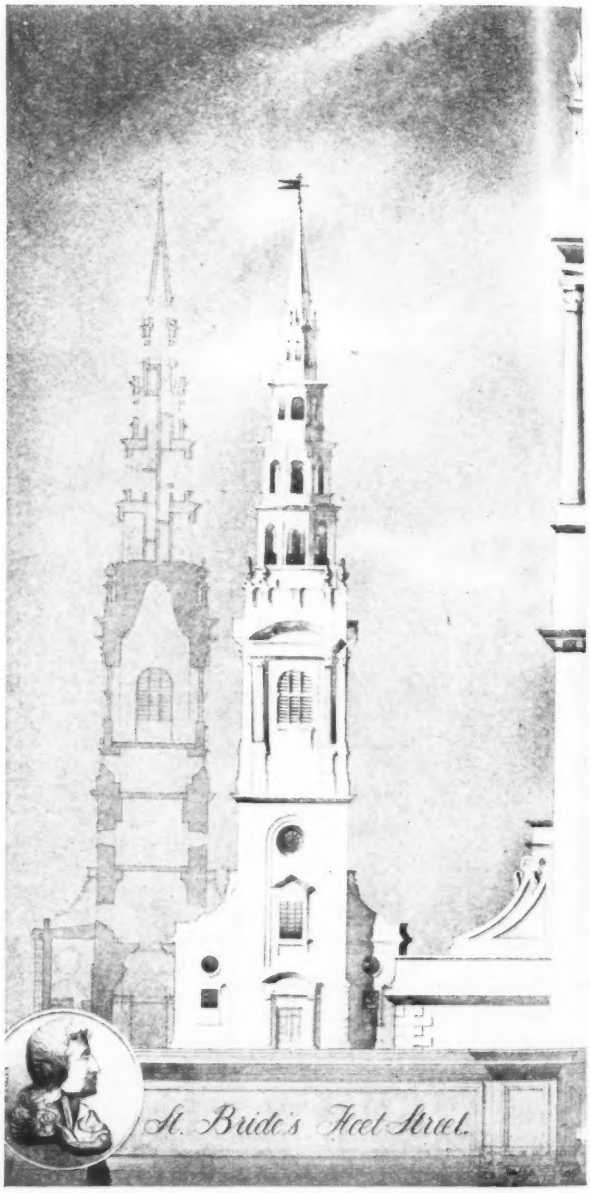


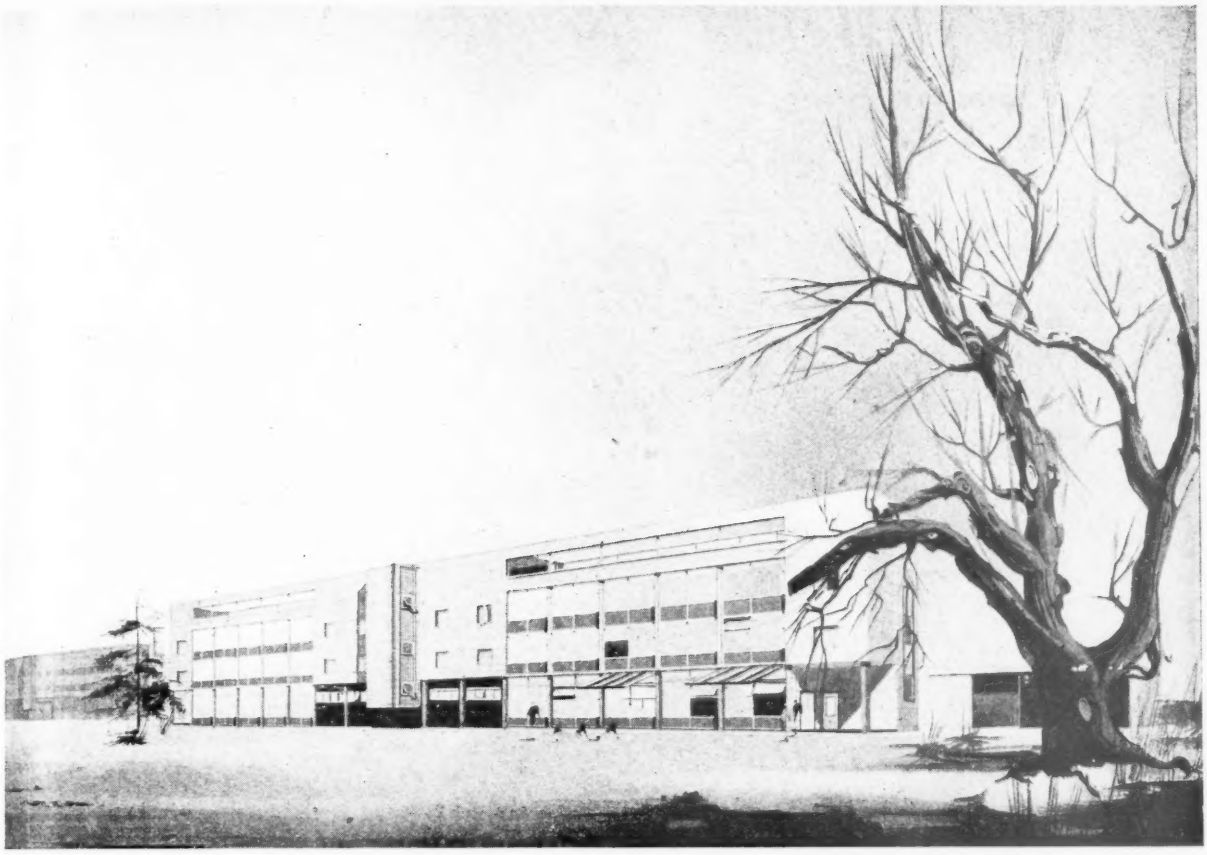
LEFT. *A Memorial Library and Museum by Captain J. Mayo, Fourth-Year Diploma Course. Model and interior study*

RIGHT. *Measured drawing by W. P. King, Second-Year Diploma Course.*

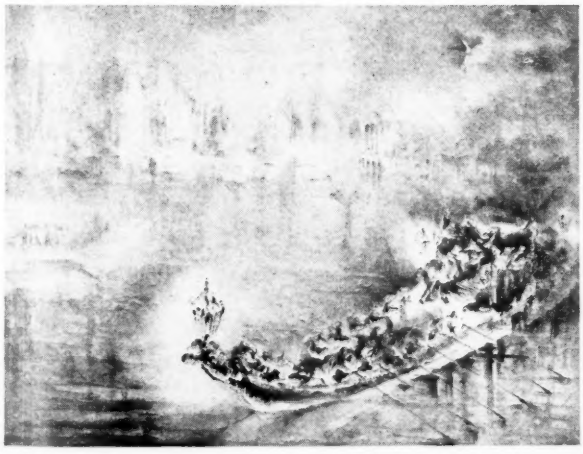
BELOW. *Sketch design by Peter Yates, Third Year*

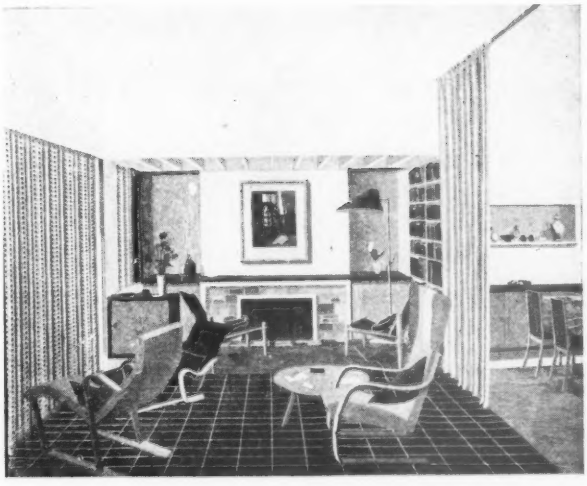






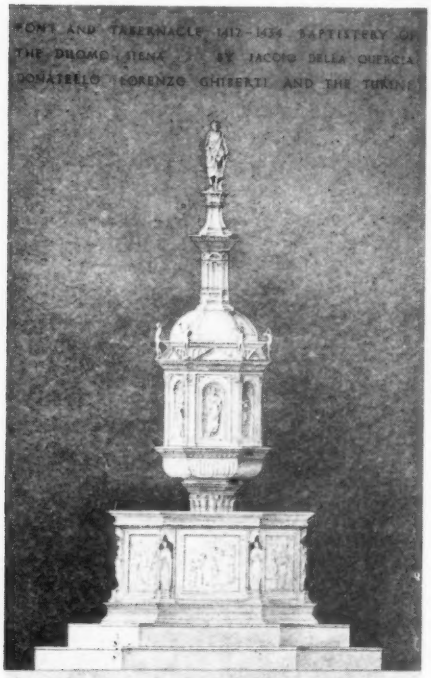
A boarding school, by H. C. Bender, Fourth Year

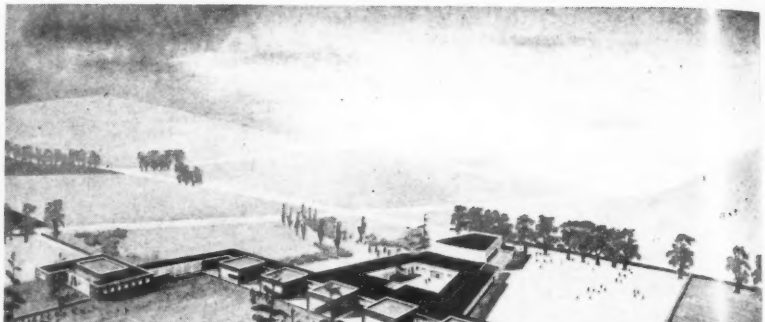




ABOVE. *Sketch design for a Royal Barge on the Thames, by Nora Glover, Fourth Year.* RIGHT. *An interior design by Gordon Bowyer, Third Year*

RIGHT. *Perspective of an elementary school by Gordon Bowyer, Fourth-Year Diploma Course.* BELOW. *A measured drawing by Olive More, Second Year*

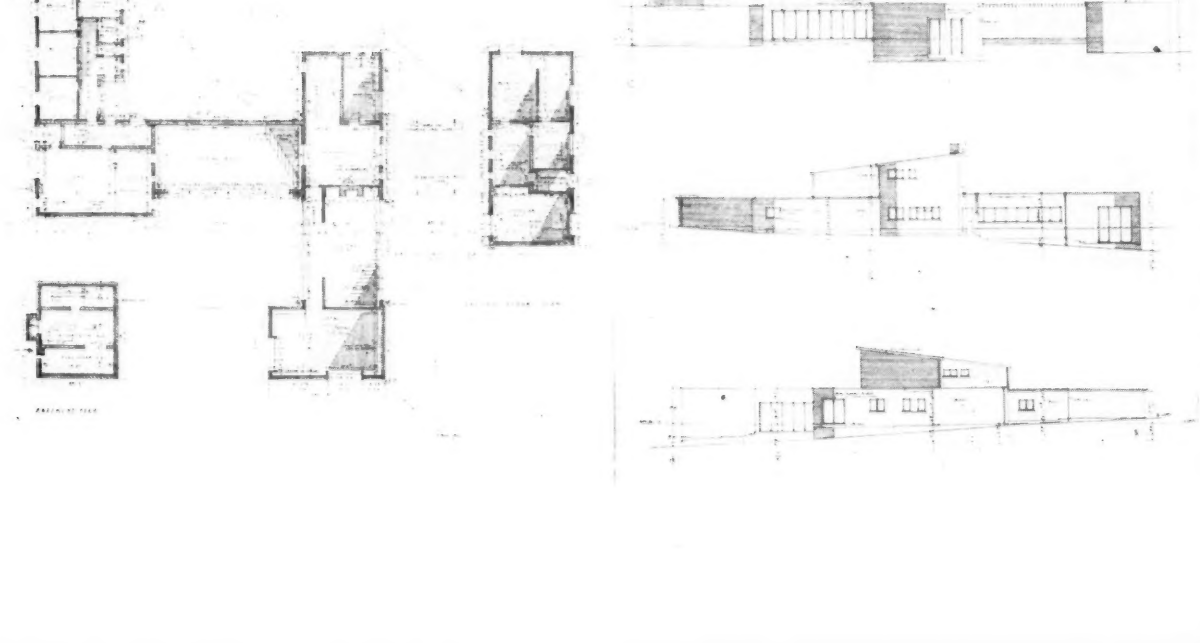

FONT AND TABERNACLE 1417-1434 BAPTISTERY OF
THE DUOMO SIENA
BY JACOPO DELLA QUERCIA
DONATELLO LORENZO GHIBERTI AND THE TURINI
ITALIAN RENAISSANCE



nothing more. There was abundant evidence of an appreciation of the cultural and æsthetic values of good building, in all ages, the past as well as the present. The School deprecates the purely scientific approach to architectural design. The standard of draughtsmanship displayed in the exhibition was high.

The drawings reproduced here have been selected more or less at random and do not represent any sequence of work. The exhibition was arranged by a small committee of the school staff under the guidance of Mr. R. Day, A.R.C.A., the lecturer on Interior Design and Colour. Many visitors at the opening ceremony commended the excellent layout of the exhibition. Students' drawings are notoriously difficult to group into an eye-taking display. Skilful and original grouping of the screens, good lettering to sections, strategically placed models and groups of flowering plants made an ensemble which should be observed by other schools of architecture. The Polytechnic Exhibition by no means contrasted unfavourably with the expensive and elaborate Knutsford exhibition on view at the same time in the Foyer.

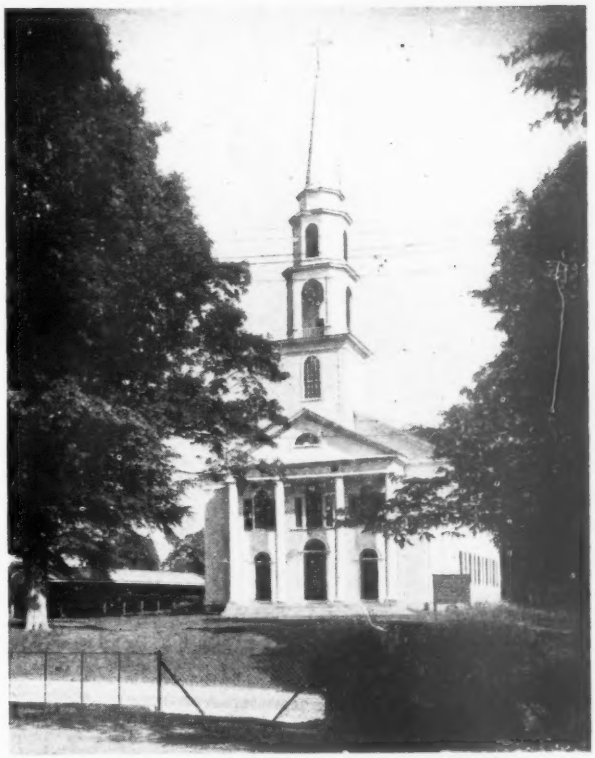
BELOW. *Working drawings for an Academy of Languages by Sylvia Payne, Third-Year Diploma Course. Two drawings of a set of five.*



THE EVOLUTION OF THE NEW ENGLAND MEETING HOUSE

By ANDREW L. DRUMMOND, Ph.D.

It is refreshing to visit the New England scene and to note resemblances to and differences from the old country. Place-names, traditions, and law remind us of England; as late as Emerson's time there were communities with a "squire," and wherever you go you may see pleasant Georgian houses, shady village greens, and parish churches with white steeples. But mingled with a conservative interest in genealogy and local history is a deep-rooted democratic tradition that finds expression in common schools, town halls, and Congregational churches. Three centuries have passed since the Puritans founded their State Church, "the standing order," which gradually yielded up its privileges, though the Establishment lingered in Connecticut till 1818, and in Massachusetts till 1834. When De Tocqueville visited New England a century ago, he found a stable, progressive civilisation that continued the Colonial tradition with slight modifications. This was also an age of literary culture when the bitter bud of Puritanism expanded in *The Flowering of New England (1815-65)*—to quote the title of a delightful book by Van Wyck Brooks. Since then, there has been a deluge of Irish and Italian Roman Catholics, an outburst of soul-deadening industrialism, and a blight of rural depopulation. Old landmarks have been submerged and old traditions sapped.* It is not too much to claim that the Anglo-Saxon regional tradition of New England has no more loyal guardians than the Congregational and Unitarian parish churches, with their historic associations, progressive tendencies, and educational ideals. Here, as in Scotland, we find Puritanism in the main stream of public life, and not a mere tributary.



Parish Church, Mendon, Massachusetts. *By Elias Carter (1820)*

I

Earlier Colonial Buildings

The early settlers of the seventeenth century, engrossed in clearing forests and repelling Indians, instinctively sought to reproduce an English village, using timber and modifying the English building tradition (*v.* M. S. Briggs, *The Homes of the Pilgrim Fathers in England and America*, Oxford, 1932). The meeting houses erected in every community for public business as well as for public worship were rough log structures. Towards the end of the century they gave way to large timber buildings, almost square, with a pyramidical roof crowned by a turret. There were two rows of windows, diamond-paned (later sashed). When galleries were added, so were dormers (known as "lucombs"). Benches were allocated according to "age, dignity and wealth"; the sexes were severely separated; children and negroes were relegated to the gallery. This "dignifying of the meeting house" led inevitably to a craving for greater ease in Zion. The hunger for sermons was not easily satiated, but one preacher at least was known to appeal to his hearers as he turned the hour-glass: "I know you are good fellows—stay and take another *glass*!" Not even brimstone preaching could generate sufficient heat; in Judge Sewall's *Diary* we read "bread frozen at Lord's table" (15 January 1716). Inevitably, high box pews appeared along the walls of meeting houses and soon invaded the central area. "Raring a meeting house" was a community effort,† made possible by considerable quantities of rum, cider and beer at public expense; only after two centuries did public opinion veer round to East Hartford's innovation (1835)—"Ample provision of crackers and cheese, lemonade and water, but no rum!" Local feeling usually ran high over the choice of a site; in fact, during the 18th century when dissent was legalised it was a frequent cause for the erection of Baptist and Episcopalian churches. A favourite position was a hill-top, and an impressive example may still be seen at Hingham, near Boston.*

This First Parish Church (1681) is the oldest place of worship in the United States in continuous use. It is known as "the Old Ship meeting house," because its shape and construction have been aptly likened to the inverted hull of a ship. Aymar Embury, in his standard book, *Early American Churches* (1914), hardly does it justice, judging it with its 18th and 19th century additions, forgetting that the flat plaster ceiling hid a remarkable open-work timber roof. It is composed of three main trusses (44 feet in clear span), each with a tie beam 45 feet long, a king-post, pair of principal rafters, and carved struts. This produces the resemblance to a ship's hull and gives it a distinctly Gothic character, though the roof does not end in gables, but is "hipped" and has a flat deck surmounted by a belfry with a *flèche*. As the only survival of this type of meeting house, it fully deserved a restoration, which eventually came in 1930.†

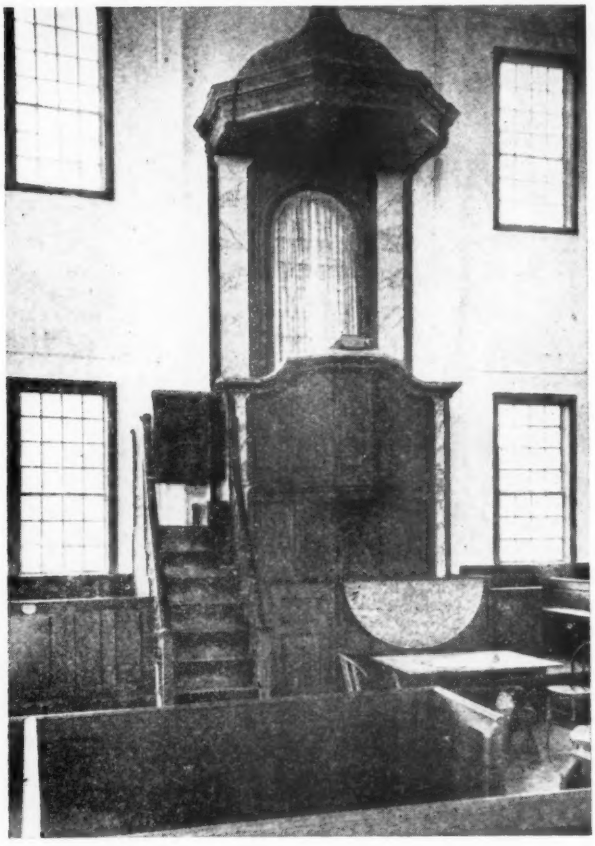
During the first half of the 18th century, the "hip roof," exemplified by "the Old Ship" and fashionable for larger

*A valuable conspectus of *Old Historic Churches of America* is given by E. F. Rines (McMillan, 1936). The various historic associations of New England, the Middle States, the South, and the West are treated in relation to church buildings of every type.

† The structural problems in raising the heavy frames of these timber buildings are dealt with by J. F. Kelly in *Old-Time New England*, The Bulletin of the Society for Preservation of New England Antiquities, July 1936.

* A fascinating account of the meeting house in all its aspects is A. M. Earle's *Sabbath in Puritan New England* (Hodder, 1892).

† See article in *Old-Time New England* (July 1930) by M. P. Corse, with illuminating diagrams. Another case of an exposed timber roof (trusses similar to those in Wool Hall, Lavenham, Suffolk)—West Barnstable Congregational Church, Cape Cod (1719).



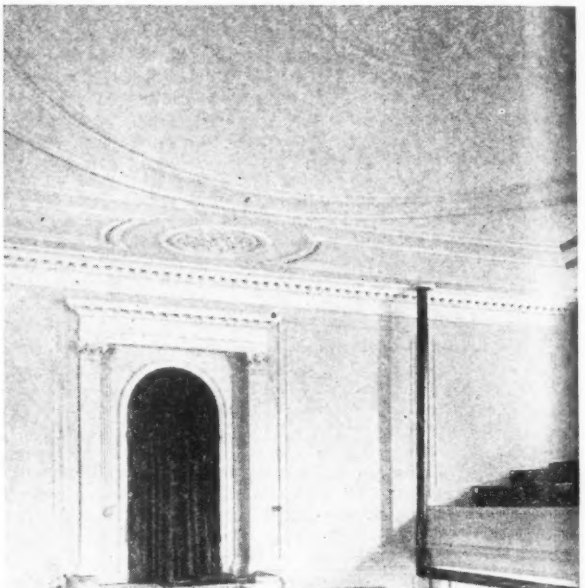
The Old Meeting House, Sandown, New Hampshire (1773-4)

churches, began to be abandoned in favour of the simple " pitch roof " used for the earliest meeting houses. Henceforth, instead of being approximately square, with the roof sloping at the ends (cp. the twin-ridge English " chapel " roof), the tendency was to be rectangular, like a church with gables. For the greater part of the 18th century, however, " the meeting house plan " was retained, viz., the pulpit stood on the middle of the " long " side, as in Scotland, with the entrance on the side immediately opposite. An innovation destined to mark definite divergence from the English meeting house was the appearance of the steeple, attached to one end of the building and rising from the ground. In Presbyterian Scotland, " a kirk wi'oot a steeple " was a reproach. But a " steeple-house " had always been the pet aversion of Quakers and the more extreme sectaries.* When Christ Church, Boston, was erected in 1723, its steeple must have been marked by many Puritans as a sign of decadence, for they dreaded the growth of an English coterie around the Governor's Court (with the possibility always in the background that bishops might be sent from home to wrest their hard-won liberties). However, six years later, " the Old South " had a timber steeple, 180 feet high, rising above the brick meeting house. This steeple, with its arched belfry set on a tower, soon became noted. It was an upward landmark well calculated to correct the horizontal monotony of box-like two-storied buildings. The close association of the Old South with the American Revolution won for it considerable prestige: since 1876 it has been used as an historical museum. Its influence was reflected throughout New England, particularly in the Connecticut Valley, by such churches as Farmington (1771) and Wethersfield (1761)—the latter illustrated by Fritsch in his *Kirchenbau des Protestantismus*, Figs. 951-3.

A good many parishes added steeples to their meeting houses later in the century, *e.g.*, Cohasset, Mass., 1723, 1799. Others, mostly in hill townships, maintained stern simplicity, though classical detail crept in unobtrusively on doorway and pulpit, and the carved spindles that topped the box pews.

The interiors of buildings like Rockingham, Vermont (1787) and Sandown, New Hampshire (1774) are severe but dignified, even though the flat ceiling comes immediately above the windows without any cornice. In the latter, there are 38 rectangular windows, each with 28 panes admirably proportioned. The only round-headed window is curiously placed immediately below the pulpit " canopie " (cp. the English and Scots custom of two long windows on each side of the pulpit). Gallery and pulpit are stained cherry, the rest of the wood in its natural colour. The very simplicity has a " numinous," solemnising effect.

The high pulpit and sounding-board give a dominant note to the Congregational or Presbyterian sanctuary quite lacking in the Quaker meeting house with only a low platform. Yet it was not till the 18th century that the rostrum ceased to be merely a rough enclosure. The wine-glass pulpit and sounding-board of King's Episcopal Chapel, Boston (1717), was much admired, considered



First Church of Christ, Lancaster, Massachusetts. *By Bulfinch (1816)*

* Cp. *Colonial Churches and Meeting-Houses—Pennsylvania, New Jersey and Delaware*, by P. B. Wallace. Photos and measured drawings. New York, 1931. 15 dols.

The South Parish Church, Hartford, Connecticut

worthy of removal to the stately new church of 1753, and exerted considerable influence on those of meeting houses. In 1729 the "Seventh Day Baptists" of Newport, R.I., built a meeting house with unusually fine woodwork—pulpit and stairs, gallery and stairs. The exterior is now preserved by a fireproof shell of brick, and is under the care of the Newport Historical Society. One would hardly expect a small and exclusive sect to pay much attention to the sanctuary, but Rhode Island was always more tolerant and advanced than her neighbours. In the same State, St. Paul's, Wickford, R.I. (1707), illustrates the obverse influence that the meeting house had on the church. For there the pulpit was in the central position and the altar with its reredos stood under a side gallery eastwards—which the people could easily face by turning in their box pews.

Incidentally, St. Paul's was moved five miles to its present position in 1799—a procedure quite common where "frame" buildings are concerned. Trinity Church, Newport, R.I. (1726), was easily enlarged by sawing it in two, moving back the chancel end and adding two bays to the middle of the building. And Dedham, Mass., underwent a remarkable transformation in 1638, 1672, 1762, and 1819. Timber certainly has the advantage of mobility, if not of permanence.

II

"From Meeting House to Church"

As the title of a series of valuable articles by Mr. C. A. Place* this indicates far-reaching changes in the New England church plan. The essence of the meeting house plan had been the placing of the pulpit on the "long side" with the entrance immediately opposite. The innovation consisted in putting the entrance under the tower, and the pulpit at the far end of the building, which was now at right angles to the road instead of lying parallel to it. The change was effected first by several of the larger Episcopal congregations, which built new churches modelled on the rectangular type of the London city church of Wren and his successors. Christ Church, Boston (1723), Trinity, Newport (1726), and King's Chapel, Boston (1753), all aimed at a dignified interior with the three-sided gallery architecturally integrated in the design. The Newport church has retained its three-decker pulpit, in spite of the influence of the Oxford Movement.

King's Chapel is rather like St. Bride's, Fleet Street, with its barrel-vaulted nave and groined bays. Built as the stronghold of Anglican Loyalism, it outlived its early unpopularity on turning Unitarian at the Revolution. It still uses an "expurgated" version of the Prayer Book, and the atmosphere of the old church is skilfully preserved.

By the middle of the 18th century, trade with the Mother Country led to commercial prosperity and increased culture in the seaport towns of New England. Whitefield might cross the Atlantic to help Jonathan Edwards to kindle religious fanaticism to white heat in the hinterland, but the citizens of Boston and Salem appealed to reason and good sense. They built beautiful houses and were eager to build houses of worship of similar elegance. Manuals such as Salmond's *Palladio Londiniensis* and Gibbs' *Book of Architecture* (1728) disseminated the principles of Georgian architecture, which were adapted to American conditions by leisured amateurs and working carpenters. If Wren was the "grandfather" of the Colonial Georgian church, Gibbs was the father. And if St. Martin-in-the-Fields enjoys a radio reputation to-day, its architectural influence was indubitable across the Atlantic in the 18th century. The First Baptist Church, Providence, R.I., dedicated in 1775 just before the War of Independence, made use of Gibbs' alternative steeple design (differing in detail from the one actually chosen). Had his rejected plan for a *circular* St. Martin's been adopted (with steeple), one wonders if this precedent would have been followed in America, where the round "Colonial" church is rare (*e.g.*, Richmond, Vt., St. Paul's, Halifax, N.S.). The Providence meeting house had no portico, but its interior, less sumptuous than St. Martin's, resembled it in a general way; the transition had been boldly made from the meeting house to the church plan; there was even the suggestion of a chancel, though about a century was to elapse before the first regular chancel was built

* *Old-Time New England* (October 1922, January, April, July 1923).

for non-liturgical American worship. Nearly forty years after the erection of the Providence church, while the United States and Great Britain were again at war, St. Martin's inspired Ithiel Towne in his heavy, monumental design for Center Church, New Haven. But here the tower ran through the portico to the ground; the flight of steps performed a real function, for the church was built over 139 tombstones covered by a very cellar-like crypt.

If it was hardly necessary to standardise and reproduce one Georgian type—Gibbs' steeple astride a portico—it must be remembered that the architect was not yet in the land. Peter Harrison (1716-75), who designed King's Chapel, was an Englishman who engaged in trade and agriculture, and studied architectural folios, "but he used them with exceptional ability under the strict Palladian guidance of Lord Burlington." Samuel McIntire, "the architect of Salem" (1757-1811), was a cabinet-maker who could make charming houses and churches as well as furniture, though Batty Langley's *Treasury of Designs* was his *vade mecum*. Asher Benjamin (1773-1845) not merely studied books on architecture, but wrote books like *The Country Builder's*

Interior of a New England Church
[Courtesy of Stewart Love]

Assistant, which made Palladio speak not merely in plain English but in the American vernacular. His good sense helped to universalise good taste, for he realised the limitations as well as the possibilities of wood (the usual material); and if his work was not always creative, he discouraged attempts at inventing "fancy Orders," and trained craftsmen to appreciate the value of simplicity and "breadth." His greatest fault was the setting of towers astride inadequate porches.

Since the end of the Seven Years War, the influence of the Adam Brothers had been increasingly felt in America. Palladian windows, fanlights, decorative ironwork and plasterwork appeared. There was a new interest in interiors, which was reflected in New England churches built in the post-Colonial era, *e.g.*, First Church, Northampton, Mass., by Damon (1812). This was felt even in a country church like East Haddam, Conn. (1796). Large buildings like Hartford (First Parish, 1807) would integrate the galleries in aisles, approximating to the style of the 18th century London city church. At Bennington, Vt. (1805), Lavius Fillmore modified a rectangular interior with a saucer dome supported by four Ionic columns with entablature blocks and pendentives. At the First Congregational Church, Providence, R.I., J. H. Greene made even more of the domical ceiling in a square building of considerable distinction (1816). A broad centre aisle leads past white-painted pews with mahogany rails to the great mahogany pulpit set in a wide open space. "Gothick" windows give a pleasant flavour to this stone church—a design practically repeated in Greene's well-known Presbyterian church at Savannah, Georgia (1819). The South Church, Hartford (1827), shows the domical ceiling so disposed with columns that the interior plan approximates to a Greek cross.

Since the progressive Brattle St. congregation* adopted the "church plan" in 1772, porticoes and steeples spread rapidly, as it was easy to add them to old timber buildings. If there was a danger of "façade architecture," there was usually no attempt to mask the simple white nave, with its two rows of green-shuttered windows. If there was a sameness in interiors, there were some delightful exteriors, *e.g.*, Old Lyme, Conn., built by ship-carpenters 1816, burnt 1907, reproduced in replica and recently taken as model by Cardinal Mundelein for a new church at his seat near Chicago. The early 19th century, which was the low-water mark of church architecture in England, witnessed the final flowering of the New England tradition. Classical architecture made itself at home in town and country. Visitors to Yale, oppressed by the Victorian medley of period styles in the university, are surprised and delighted when they turn the corner and behold the three churches set amidst elms on New Haven Green—Center and North (Congregational) alongside of Trinity (Episcopal)—all built about 1814. Park Street Church, Boston, was built in 1809 as a bulwark of orthodoxy against the advancing tide of Unitarianism. But even "brimstone corner" was gracefully designed by Peter Banner (an Englishman); and the exacting taste of Henry James approved of its mellow brick and tapering steeple as the ecclesiological expression of the Boston spirit. The unusual rounded porches on each side of the tower were due to accepting the principle that "a difficult site is the architect's opportunity"; angles were not allowed at a street corner. This was the time when Boston was being replanned by Charles Bulfinch (1763-1844), "architect and citizen," as he is well defined by his biographer, Mr. C. A. Place. Yet it is his son's name that is best known in England—the author of *The Age of Fable*.

Charles Bulfinch was a polite Bostonian, with the wide interests of the 18th century man of culture. Like his friend Jefferson, he was a keen architectural amateur. Before setting out for Europe on "the Grand Tour," he wisely decided to "see America first"; so he absorbed what was best in the Colonial architecture of New York, Philadelphia, and the South. On his return from the European *Wanderjahre* he was approached by so many friends to design their houses that he felt impelled to limit the calls on his expert knowledge by charging a fee, incidentally becoming America's first professional architect. "The Age of Architects" was thus inaugurated, in succession to "The Age of Books." The Capitol at Washington and State Houses at Boston and Hartford are his brilliant achievements. Many of his churches were later demolished, *e.g.*, Hollis Street, Boston, 1788 (with an interior strongly reminiscent of St. Stephen's, Walbrook), and the New South, Boston (1814). But his masterpiece, the First (Unitarian) Church of Lancaster, Mass. (1816), is still unspoilt, and a full description by a former minister, the Rev. C. A. Place, may be seen in the *Architectural Forum*, June 1921.

* A church that led in the relaxation of Puritan rigidity in worship. This liberality did not go as far as accepting the legacy of an organ (1713), but organs were common a century later.

The brick-arched portico with round tower and cupola has real individuality. And Bulfinch was remarkably successful in his difficult task of making the central pulpit architecturally effective. Unlike earlier pulpits that rose from a stem or in bulk, it was supported by Ionic columns and set against a background of pilasters framing a round-head curtained panel. Many of Bulfinch's ideas were "codified" by master craftsmen like Asher Benjamin, and were widely reproduced throughout New England.

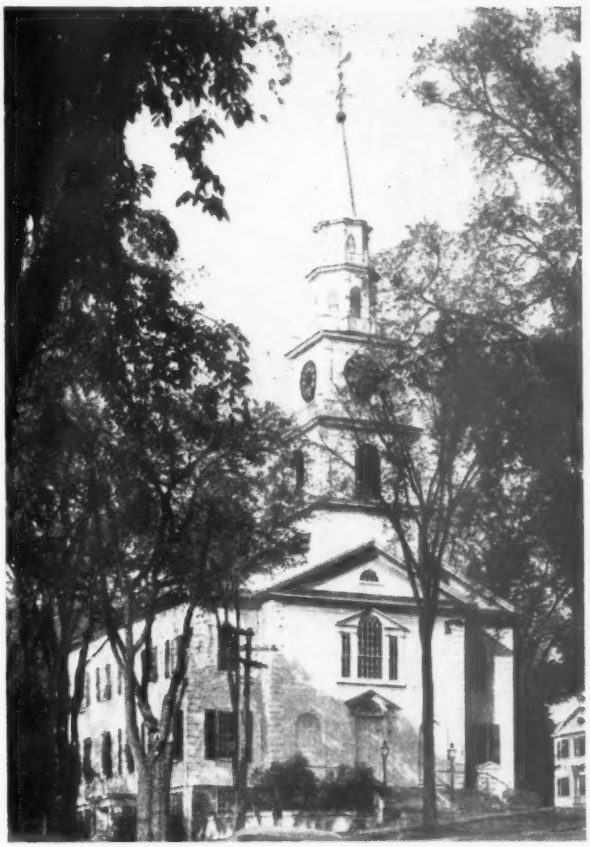
III

The Greek Revival and After

If Bulfinch held the equilibrium between the vernacular vigour of Colonial tradition and the pedantry of classic formalism, the latter was to triumph about 1825. It was the fortune of English Georgian to "suffer a sea-change into something rich and strange." Could one expect such a metamorphosis of the cold, academic Greek Revival? If Greek Revival was a style of the schools in England, largely limited to cities and fashionable watering-places, it seemed unlikely that it would take root on American soil. It might appeal to the cool Unitarianism of Boston and other sea-coast cities, but what of the hinterland, where Calvinism impregnated with Revivalism seemed still impregnable? The Greek Revival had surely little in common with a system that bade men, in Dr. Hopkins' phrase, be ready "to be damned for the glory of God." Yet, in New England as in other parts of the United States, the Greek Revival was a popular movement that affected modest homes as well as public buildings. Byron had stirred up an interest in ancient Greece, which took the place of Rome (discredited by Napoleon's patronage). And these were days when classical education was by no means scorned in America; it was considered worth while to learn ancient languages; Plutarch was widely read in translation. T. F. Hamlin thinks that in the popular consciousness the search for a physical Eldorado in the West and the mental creation of an Ideal Greece blended (*The American Spirit in Architecture*, p. 124 f. (Yale, 1926). At all events, Greek Revival porticoes and peristyles sprang up as frontiersmen moved from New England into the Middle West, giving some justification for geographers' nomenclature—Athens, Ithaca, Ionia, etc. There was a constant demand for manuals like Minard Lafever's *Modern Builders' Guide* (New York, 1833). And if function was often ignored, sunshine was an ally that could be relied on, the American climate being kinder than the British in flooding colonnades with the radiant light they called for.

The Greek Revival did not involve radical structural innovations. The Colonial steeple usually gave way to a stumpy tower crowned by a cupola, and the details of the portico were changed. In cities you might see a tower reminiscent of Inwood's St. Pancras, *e.g.*, Burlington, Vt. (1842), a reproduction of the Choragic Monument of Lysicrates. If Greek Revival in country districts sometimes fell to the level of what Dr. R. A. Cram dubs "Græco-Baptist," there are many churches of this period that harmonise admirably with older "Colonial" buildings, *e.g.*, Enfield, Conn. Village craftsmen trained in the old tradition could master the more academic styles—for, after all, were not the Greek Orders themselves evolved by carpenters who passed on their discoveries to masons? Even the introduction of pointed windows and simple wooden tracery sometimes blended with a Doric portico. The Greek Revival set its seal on the churches of New England, while in Scotland it produced only the brilliant episode of "Greek Thomson."

Unfortunately, the Greek Revival was a step towards the revival of other period styles that did not lend themselves to wood. This was evident after 1850. Gothic Revival, imported to America with other ecclesiastical trappings of the Oxford Movement, was largely patronised by the Episcopal Church and spread to other denominations. Where Period Gothic was concerned, the American craftsman was "out of his depths"; and the Industrial Revolution reproduced exotic forms with a facility that spelt artistic chaos. Industrialised Gothic "processes" soon displaced the quaint "frescoing" of travelling artists who, in the second quarter of the 19th century, moved about New England covering the white plains of inn and meeting house walls with landscape scenes in colour.* The introduction of organs often involved a phalanx of gilded pipes along the wall behind the pulpit—too often left blank by the builders of the meeting houses. As the 19th century progressed, the fine old pulpits were repeatedly lowered—lowered in more than one sense, for the "democratic" disuse of gown and bands (universal in the 18th century) resulted in a loss of ministerial dignity; the pulpit became a popular rostrum. This accompanied the degradation of the old churches by utilitarian changes and what were considered æsthetic improvements.



The Congregational Church, Middlebury, Vermont. By Lavius Fillmore (1805)

Fortunately, the 20th century saw a turn of the tide, and there have been many excellent restorations since 1919. Victorian stained glass, curved pewing, and "Gothic" rostrums have been torn out. Mahogany pulpits of the traditional type have been installed, the central aisle restored, and an atmosphere of restraint and serenity brought back. The centenary at Litchfield (1829-1929) was celebrated by this headline:

"An Old Church Comes Into Its Own. Litchfield tears down Gothic building to give place of honour back to the Meeting-House long abandoned to Jazz and the Movies!"

One might almost complain that "Restoration" has sometimes been carried to the length of pedantry, as in England *mutatis*

* *v* art. by E. B. Allen on "The Frescoed Walls of the Meeting House at Middleton, N.H." (*Old-Time New England*, January 1930)

mutandis. Bennington, Vt. (1806), may claim exception on the grounds of its restoration as "Vermont's Colonial Shrine" (1936). Here, the 48 box pews in the area have been reconstructed with their pewter candle-holders; the Asher Benjamin pulpit remodelled; the organ pipes replaced by a concealed electric organ; the original ingrain carpet reproduced. This memorial has become a place of pilgrimage; in the summer of 1937 alone there were over 10,000 visitors.

The instinct to preserve has led to the impulse to create. A number of notable new churches have found their inspiration in the traditional New England house of worship, *e.g.*, Wellesley, Mass.; College Chapels at Harvard and Yale; United, Bridgeport, Conn.; Second Unitarian, Boston. The last of these (by Cram) illustrates a tendency to look to the London city churches for a more varied interior treatment, for it resembles Hawksmoor's Christ Church, Spitalfields, with a shallower chancel, and Ionic instead of Corinthian.

In these days, when timber houses have been seriously suggested in Great Britain, the possibility of timber churches may reasonably be visualised. Study of the New England churches indicates a logical connection of function and form, economy and æsthetics. As T. F. Hamlin has said, we find a "mixture of solid construction, dignified and classic detail, big simplicity of composition outside, and in the interior, panelling and stairway, all characterised by a quiet beauty of composition and a delicacy and appropriateness of ornament . . . a style which moves the emotions of many people to-day with a strength of appeal difficult to over-estimate." As one of their own poets has said:

"The sight of a white church above thin trees in a city square
Amazes my eyes as though it were the Parthenon.
Clear, reticent, superbly final,
With the pillars of its portico refined to a cautious elegance."
(*Amy Lowell*.)

THE EXPORT GROUP FOR THE CONSTRUCTIONAL INDUSTRIES.

It is perhaps not sufficiently appreciated among those whose work lies either professionally or commercially within the Building Industry how great is the contribution which the industry can make towards the rehabilitation and further development of our export trade. The arrangements which have been made between the Royal Institute and the Export Group for the Constructional Industries for collaboration and mutual exchange of information in regard to prospective projects overseas are therefore of importance.

The Export Group for the Constructional Industries, 82, New Cavendish Street, W.1, is a comparative newcomer among the associations operating within the industry, although it will shortly be celebrating its sixth birthday. The Group was formed at the instigation and under the auspices of the Board of Trade. Its objects are to promote, in every way and by every means, and in particular by co-operative action among its members and in conjunction with government departments and, where desirable, with other bodies or persons, the carrying out by British contractors of contracts for building, civil engineering, and public works outside the United Kingdom of Great Britain and Northern Ireland.

Membership of the Group is open to British building and civil engineering contractors and includes practically all firms interested in and capable of undertaking works overseas. It is the aim of the Group that there shall be a British tender for every major work of construction overseas. One of the difficulties in the past had been to place in the hands of all contractors who might best be able to make use of it, information at a sufficiently early stage about prospective works abroad. This was certainly a problem of the Department of Overseas Trade in the case of information received from its overseas officers and probably also one which private architects experienced, though perhaps to a lesser degree. To broadcast indiscriminately all such information might well prove detrimental to the interests of contractors who had shown enterprise in seeking constructional work abroad, while the selection of individual firms would have laid the department open to public criticism. This problem the Group has overcome by forming an association of contractors who have declared their interest in work abroad and by circulating to its members the earliest information of all overseas projects in which any member has not given the Group previous notice of his individual interest.

The Group has principally relied for information upon the Export Promotion Department of the Board of Trade and that department has impressed upon its officers abroad the need and value of the fullest reports upon prospective constructional projects of all kinds to be carried out within their areas. But there are other sources of information which are equally valuable. Members pass on to the Group particulars of projects received from their agents abroad which may be outside their particular business or of no immediate interest to them. It is known that similar information comes into the hands of architects and civil engineers. It was to seek the co-operation and assistance of architects in the work of building up again the nation's overseas trade that representatives of the Export Group, under its chairman —Sir Henry Holloway—recently met those of the Royal Institute. The recommendations for the mutual exchange of information in regard to prospective building works overseas made at that meeting have been approved by the Executive Committee of the R.I.B.A. It would be natural for a British architect to prefer to have his work executed by a British contractor, but the principle now recognised by both sides goes much further than that. It is hoped that architects will regard it as incumbent upon themselves wherever possible to use their influence with their clients to secure the employment of British contractors for overseas works in which they may be concerned. For the furtherance of the objects mutually agreed a Liaison Committee of the R.I.B.A. and Export Group has been established.

There is a particular field of overseas development which is likely to become of increasing importance. Our Government is pledged to spend large sums of money in colonial development. It has been among the achievements of the Export Group to secure official acceptance of the principle that where British money is to be expended on capital works in the Colonies, British contractors should be given an opportunity of tendering for the works. This principle was not readily accepted in official quarters, but in April 1945, as is recorded in the fifth annual report of the Export Group, the Colonial Secretary sent a telegram to Colonial Governors containing an instruction in the following terms:—"It should therefore be a rule that in all cases for works financed from Colonial Development and Welfare funds United Kingdom firms must be given full opportunity for submitting tenders." It might be suggested that the same rule should also be applied in regard to the professional services involved in such works in the Colonies.

This short article is intended primarily to introduce to the profession the Export Group for the Constructional Industries and to outline briefly its aims and objects. If it should also result in stimulating the interest of architects in overseas work as a contribution towards national reconstruction, it will have more than served its purpose.

LAND OWNERSHIP AND SPECULATIVE BUILDING

By STEEN EILER RASMUSSEN

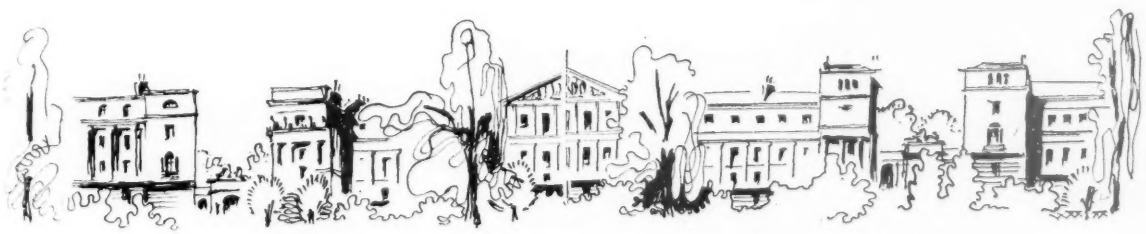
A translation by A. L. Gardner, Librarian, the Building Research Station, from the Danish of Chapter XIII of Rasmussen's "London"

Theoretically, all English land may be regarded as the property of the King. The king is the legal heir from the time of William the Conqueror, who on his seizure of the country in 1066 instituted a new legal basis for the ownership of all English land. He himself was *Lord paramount*, the unrestricted owner of the land, and all other persons having rights over land were his tenants, receiving their rights from him. Even to-day this medieval institution remains as the deepest, if rather overgrown, foundation of English land ownership. The idea that a private individual should be able to claim outright ownership of land is quite foreign to English law. The law still survives that, if no legal heir can be traced, land automatically reverts to the Crown.

William the Conqueror shared out the land in large portions between his retainers. He could not, of course, himself administer the huge area of land of which he had become the possessor; moreover, he felt himself indebted to the Norman nobles who had joined him in his expedition of conquest and had thus made that bold undertaking a possibility. The nobles received their land subject to certain conditions, among which the most important was that they would, whenever necessary, furnish the king with military aid or with equivalent value in money; a further requirement was that the holder should be a "freeman." The holding of land on these terms was called *freehold*. When later the original obligation to provide military aid had fallen completely into desuetude, the holder of the land no longer provided anything in return for the possessions which he or his ancestor had received from the king. In this way the term "freehold" in England came to mean absolute right of ownership of land: but there remains in the word itself a reminder that its original meaning was "on hire," since the English "hold" in this sense corresponded closely to the French "tenure," a word which English retains in its original meaning. Land could, moreover, be passed on to retainers of the owner of the freehold, in which case there was no contract, but the transaction could be confirmed "by copy of court roll"; this type of holding was known as *copyhold*. Apart from freehold and copyhold, which were unlimited as regards time, there arose a third type of tenure, restricted to a prearranged period of time, which was called *leasehold*. This is not actually a different kind of ownership, of course, for if one man has a piece of land on leasehold there is always someone in the background who possesses the freehold: the legal phrase is that "all land is ultimately freehold." The English land law is, however, actually much more complicated than the above outline of its origins would suggest.

For a mile around Charing Cross a very large part of London ground is in the hands of large landowners, trusts of companies. They do not sell land freehold, but only on long leasehold. Among these areas, however, there are parts which can be acquired freehold. Further out come the regular freehold districts, although even here the leasehold system flourishes, because it involves less outlay on the part of the would-be purchaser and also because in England there is not the same easy access to loans as there is, for instance, in Denmark.

Great areas have been built up with small one-family houses. This can happen as follows:—A well-to-do family X owns an area which has become ripe for building. The first thing to be done is to see that it is placed under a suitable administration, which is given legal powers to look after the family's financial interests. It must be borne in mind that in many cases the land has not been bought outright but is held for a long term of years; thus it is desirable to have an impersonal intermediary, usually a legal administrator, by whom the family is permanently represented irrespective of individual deaths among its members or of whether or not they are business-minded. Thus comes into being The X Trustees Estate, the business of which it is to see that something is got out of the site. First of all roads are made; by the current regulations they are 40 feet wide. Beside them the land is divided into plots of 16 by 100 feet. It may transpire that the plots cannot be disposed of freehold, as possible customers with the necessary capital cannot be found. So the land is offered on a 99 years' lease, say at £3 per plot per annum. Whereupon a speculative builder Y appears, who secures for himself the express right to re-let the land and to raise the annual rental by £2 10s. to a total of £5 10s.—subject, however, to houses being built on the land. The owner X, for his part, inserts the condition that he has the power to re-purchase the rights to this "improved ground rent" for a sum equal to 20 times its annual value—i.e., for £50. The builder Y now erects repetition houses on the land. The X Trustees Estate provides



him with two-thirds of the building costs at 5 per cent., the remainder he must find himself. When the houses are built, he sells them for about the same amount as they cost him to build. From this sale he receives, therefore, practically no profit; but he can clear a sure profit by selling the improved ground rent rights back to the original owner X for the agreed £50 per house. Thus the speculative builder vanishes completely from the scene after having received his reward, and can launch into fresh undertakings. X can now receive an annual ground rent per house of £5 10s., until the 99 years' lease has expired; then both the land and the house on it revert to him as his unconditional property, which he may let at an annual rental corresponding to the increased value it may have acquired. Alternatively, X may prefer to realise an immediate cash sum by selling the ground rent rights. Since these are regarded as a very safe source of income they are very easily disposed of, and he receives for them a sum equal to 25 times the annual value of the rental, i.e., a sum of £137 10s. for each plot. He has paid £50 to the speculative builder, and the road costs per plot may be about £8. He thus clears £79 10s. per plot. So we see that the owner X, who could not make anything out of the unbuilt-on ground by leasing it, can if he can only get houses built on it, immediately receive either an annual rental or a considerable sum in ready money.

Everywhere in London one can find quarters which have arisen in this way. The streets for these residences have been laid out by the original landowners and not by the public authorities. The municipal authority is responsible for the main traffic routes for through traffic, but the finer network of small streets and roads may be laid out as the individuals concerned may wish, provided only that they comply with the requirement regarding a minimum width of 40 feet (more recently it is possible to go much lower than this limit in English towns).

The English practice in these matters, rooted directly in the legal practice of the middle ages, is remarkably primitive and old-fashioned in comparison with continental practice. From the point of view of financial theory it is very undeveloped. But it is much more successful in getting houses built than the beautifully worked-out systems in use on the Continent. It is instructive to compare the English system with the Danish. In both countries the system of property ownership and of building finance in towns was originally taken over from the conditions prevailing in the country districts, and the methods of financing correspond closely to the rural situation in the two countries. In England the agricultural worker is still in many cases dependent on the landowner, and it is thus only natural that it is the large landowners who must in fatherly fashion provide the necessary means to enable the worker to better himself. After Denmark had abandoned this patriarchal position, it was necessary to find some way of ensuring easy access to capital for land development. This has been done on the German model by means of credit and mortgage associations, of which the country is justly proud and to which it is hard to find a parallel in England. The owner who wishes to raise a loan, mortgages his property with the association and undertakes to pay an annual sum which will clear off the loan within a given period, usually 60 years. In return he receives from the association a number of credit notes for round sums. These notes he can cash immediately. They are much safer than credit notes on any single individual could be, since they are backed by the combined resources of the association. By thus combining the individual landowners obtain loans on more favourable terms than they could get by individual action. It has been of decisive importance for the development of Danish agriculture that easy access to loans could be had in this way. On the other hand there are considerable dangers inherent in this system which have received only too little attention. The object, which is to further production by providing capital for improvement and development, is easily set aside in favour of the means: good securities and speculation in them. The loan, instead of being a means of encouraging new development, becomes an index to the value of the land. Instead of being satisfied with the smallest possible loan and thereby keeping his indebtedness as small as possible, the owner strives to get as big a loan as possible in order to increase the selling value. In bad times the owner may find himself saddled with obligations which it is far beyond his power to meet. Thus the easy access to credit becomes a danger to the landowner. The free man becomes a slave to paper, to an ever-growing mountain of priorities. But the social consequences of the system have been even more unfortunate in the towns. The owner of land in rural areas can, if he wishes, improve the value of his property by productive labour—by drainage, cultivation, etc., to get a better yield or to improve the soil. In the town, on the other hand, the value of land does not depend on the work put into the soil, but on conditions over which the owner has no control whatsoever. He cannot by his own industry increase the value of his land, he can only see to it that he gets the greatest possible number of people to pay rent for living on his ground. If one landowner builds a one-storey house on his land, and another landowner a five-storey house, the latter receives five times as much in rents as the former, even though the sites may be equally good in every respect. In the five-storey house the individual tenants are each housed on one-fifth of the land area which the tenants of the one-storey house are on. But they will all pay the same ground rent, since the value of the land will be automatically forced up to five times its original amount, i.e., to the capital value corresponding to the maximum rental which can be obtained from tenants. The land value thus becomes capitalised immediately on this highest rental income, which depends on the permissible building possible under the local building laws. In raising loans on the site this "land value" is treated as though it were a real and not a fictitious value. The whole of the ground of a large city becomes in this way expensive, the whole of it becomes burdened with the capitalisation of the rental incomes of a heavily exploited density of building. All the residents must contribute, through the rental that they pay, to the interest on the large capital value to which the price of the ground has been inflated. The high land values become in effect a general tax, a price-raising duty imposed on the whole town.

With such a credit system, which provides capital to the owner of building land and not to those who will use the residences, the result is that rents do not become lower with the greater housing density. And since the value of the building is fixed in relation to the rents which can be obtained on the basis of a normal annual payment per unit of floor area, the system leads to a form of building having the greatest possible occupancy area in relation to the ground area, i.e., tenement building, and this happens even where there are no other factors tending to cause it.

This sounds surprising, since it might be assumed that the law of supply and demand would be applicable also to housing. Thus one would think that when accommodation was in great demand it would become dearer, and with a falling demand would be come cheaper. But the matter is not so simple as this, because the property owner and his customer are in very different positions. The landowner can get capital, whereas those who are looking for accommodation have not the ready capital but can only raise sufficient for an annual payment, and must therefore submit to the conditions set out for them. The property owner

is in the position of a monopolist as against a prospective tenant. If on the other hand the seeker after accommodation is possessed of capital and thus presents himself as a purchaser instead of as a miserable tenant, the position becomes quite different. He might then acquire ground at the current price and build whatever he wanted, instead of accepting whatever accommodation may be offered him. But the rents of flats simply cannot be so high that it would be appreciably cheaper to live in one's own single-family house. And here the building laws come to the assistance of ground speculation: in the typical tenement towns the building of single-family houses is rendered extraordinarily expensive and difficult by a far too cumbersome administration and by strict building and other regulations which are formulated with a view to high buildings but are nevertheless applied also to low buildings.

With any other type of goods such a monopoly position would soon be broken by the entry of new producers who would be interested in finding new production methods by means of which they could offer the goods at lower prices. But that does not apply to residences in a real tenement town. If there arises such a surplus of flats that tenants are given a wide choice, and rents therefore tend to fall, the supply of capital for new building stops, and hence production stops. If, on occasion, this does not happen sufficiently promptly to prevent a temporary drop in property values, that is merely regarded as a slightly inefficient functioning of an otherwise sound system. For capital is always concerned with getting the maximum possible rent from every unit of land, and the ground can well lie and await the day when it will be ripe for the maximum density of building, with no fear that it will, like other types of goods, either spoil or become out of date. It is not sold in order to make a single profit which can be reinvested in further production. Care must be taken that it is built up in such a manner that for an unforseeable future period one can draw rent from it every year. Thus from the ground speculation point of view it would be stupid to build low houses on a site today in order to obtain a smaller immediate return, when there are prospects that in five or ten years it can be used for building a six-storey house and will thus give a six-fold return ever afterwards. The ground values already imply the building of tenement houses. Unbuilt areas, which bring in not a red cent in the form of income, thus become so costly, as the result of the well-intentioned credit system, that they are not built on until the time is ripe for the maximum density of building. It is typical of the large towns with this system of financing, that even the outermost quarters develop in the form of many-storeyed houses. Outside the town one can see solitary six-storey buildings (usually corner blocks) standing with their high fire walls grinning out over open stretches which are still being used for agricultural purposes. These are advance signs that ground speculation has seized on the area which from now onwards is dedicated to high building. A credit association system which provides capital for property, i.e., for land with buildings, leads in large cities to land speculation. Whereas in London it is difficult to get capital invested in the land in residential quarters and easier to get it for productive undertakings, one finds a distinct building speculation. It is very important to distinguish clearly these two ideas. It is this which gives the city its characteristic appearance, which makes it either a land-speculation town or a building-speculation town.

The difference between the two types of town is most clearly seen in the residential quarters, but since by far the greater part of a town consists of residential quarters, this difference is decisive. In both types of town the most expensive land will lie in the big business centres. Here the values are less dependent on how densely the area can be built up than on the actual situation. In a shopping quarter it is often the street level, first floor and semi-basement storeys which represent a large part of the value of the property. If on the other hand the buildings are used for offices, the situation can be rather different, or it can be possible (particularly in very large towns) that the upper storeys represent an appreciable part of the income on the property. The difference between land-speculation towns and building-speculation towns is not therefore shown in the values of the most favourably situated land. In both cases these will be high. But in the building-speculation town the land values fall off sharply towards the outskirts of the town, since one is paying only for the value of the situation.

In the land-speculation town, on the other hand, a high price level holds right out to the limits of building, since everywhere, in addition to the value of the land arising from its situation, there has been added the capitalised rental value of the flats which can be stacked one on top of another. A graphical representation of the land values across a section taken from the centre of the town to its outer limits would in the first type of town show a high peak at the centre, from which the curve falls rapidly until the rural area is reached. In the other type of town, on the other hand, the initial drop is of a lesser magnitude, and only at the limit of the built-up area is there a sudden heavy fall. This relationship actually finds a visible expression in the buildings themselves: in the building-speculation town the height of the houses is on the whole a function of the site values, and outside of the most sought-after quarters there is quite low residential building; in the thorough-going land-speculation town, on the other hand, the tenements as previously mentioned, thrust their steep cliffs right out of the open country. On a small scale one can sometimes find both of these town types within the same city. In Copenhagen there is on one side Osterfarimags Street a little piece of a building-speculation town in the Building Association's houses and on the other side an equally characteristic example of a land-speculation town in the so-called Stockholm Street quarter. The low type of building here has come about in the same manner as in England. The ground was acquired at a time when it was still of very low value because it lay outside of the built-up area of the town. The capital for its building development was not supplied to a landowner who was interested in getting the land valued as high as possible, but was provided as contributions by the members of a building association, whose members wished to own their own houses and also to pay the lowest possible price for the ground. The houses are quite standardised in appearance, and the property is subject to restrictions which forbid multi-storey building on the site. It is a clear indication that in building here the object has been the welfare of the inhabitants and not land speculation. An individual owner cannot go and spoil the whole for the others by erecting a multi-storey house among these small houses. In the Stockholm Street quarter building was held up until it could be in terms of five storeys and thus provide the maximum possible rental income for the area. The difference is clearly seen in the ground values, which in the Stockholm Street quarter are roughly double as great as in the building association's area. This does not mean that the ground values in the latter quarter had been held down to their earlier level. In the course of the years they have climbed steeply with the ground of the town, and at the same time the ground values in the Stockholm Street quarter have also increased. But the ratio between them keeps more or less constant: double the ground values where there is exploitation.

This is a good example in that the two areas are equally well situated in all other respects. It is more difficult to compare quarters in one town with quarters in another because one can

never find examples which correspond sufficiently closely with one another in all respects. But from the example in Copenhagen given above, it is permissible to draw comparisons between the building-speculation town and the land-speculation town—conclusions which are not weakened by various possible explanations which can be provided.

London clearly shows itself to be a building speculation town, as we might expect. There does not exist any publicly available list of valuations of the land in the town. But through the announcements of sales and purchases of property, which appear from time to time in the Press, one can obtain a series of samples which throw light on land values in the town. Centrally situated sites are quoted at a very high price corresponding to the town's leading position in world commerce. A site in the City of London in the streets around the Bank of England and the Exchange is a gold mine. In 1923 office sites in this area were being sold at £645 per square yard, in 1932 they were fetching £700 to £1,100 per square yard. In Oxford Street, the City's main traffic route to westward, the land was worth £300 per square yard in 1932, as compared with just over £100 per square yard for the most expensive land in Copenhagen at that time. In September 1930 £250,000 was offered for Norfolk House in St. James's Square. The offer was not accepted. This sum works out at £500 per square yard, which, however, includes the buildings. The latter, incidentally, were of little value to the would-be purchaser, who wished to pull them down in order to erect a theatre. In Soho, in November 1930, the site of No. 5 Dean Street was sold at a price of £35 per square yard. Good sites in Hampstead were changing hands at a price of 50 shillings per square yard. Before the underground railway was brought out there in 1907 one could acquire them for 3d. a square yard. Beyond Hampstead there are innumerable quarters built up with terraced houses or small villas, where the ground prices were much lower. In Edgware the price of ground in the main road close by the station was about 5 to 6 shillings per square yard.

While London, which continues to grow by means of spread-out quarters of single-family houses, is a clear example of a building-speculation town, it can no longer be said that Copenhagen is a typical land-speculation town. We can see that this has been the case at one time, when Osterbro and Norrebro and Vesterbro, with their tenement buildings, were the city's most advanced outposts. At the moment Copenhagen is a town which appears to be transforming itself from the continental type to the English type. The land on the town's outskirts, which in earlier times would have remained waiting until it was ripe for five-storey tenements, is now being built up with two-storey terrace houses quite in the London fashion, except that the building is not allocated in small plots. In Copenhagen's development during recent years one can trace a number of those factors which make a town into a building speculation town. In the period after the first world war many land values were held down by the fact that one of the conditions attached to State or communal loans for residential building purposes was that the land prices paid should be, in effect, no higher than the 1914 prices. The community was able to do this in virtue of its position as the owner of extensive land areas which it could offer at what were considered fair prices, and this became of decisive importance since for a time no building was carried out other than by the aid of public loans. Thus the landowners' monopoly was broken. Another factor which puts a strong brake on land speculation is the land tax. The expected direct effect of a relatively low ground tax, which can simply be shifted on to the shoulders of the tenant, is not so obvious as the protagonists of the ground tax might think. On the other hand the indirect effect, arising from fear of an increasing ground tax, is certainly great. It is no longer so tempting to let the land lie to wait until it can be used for tenements, when one can immediately obtain a lesser but safe return by using it for terrace houses. Another circumstance which has contributed to the change in the character of Copenhagen is the institution of housing associations, i.e., associations of people who want houses. In this way capital is afforded to actual users of the houses and not to landlords, and thus the inducement to run up land values to a high level is absent. Finally, a number of producers of building materials and also building contractors have received such strong support from the banks that it was in the interests of the financial supporters to keep these producers active. This again meant money for speculative building—just as in London—and not for land speculation. (Other factors which have contributed to Copenhagen's conversion into a spread-out town on the English pattern are the improvement of means of transport and the population's steadily increasing demand for residences with gardens; finally, the sheer insufficiency of tenement buildings has virtually driven people into houses with gardens.)

When one sees how land-speculation can become the decisive controlling factor for the housing conditions in a town, and sees also how completely useless the land speculator is in the matter of house construction, one can easily appreciate the efforts which are made to render all land speculation impossible. From the social point of view it would be ideal if the State could actually be regarded as the sole landowner, just as in England the Crown is theoretically regarded.

The inhabitants would have democratic control over the land, would be able to derive advantage from the results of their own labours, but not from fluctuating estimates of value which are independent of the work carried out by the landowner. This objective could be achieved by a steadily increasing ground tax, which would finish up by swallowing up the profits of ground speculation. But before this end is achieved, the means itself appears to be not without danger. For in order to obtain a basis for taxing land values a valuation would have to be undertaken in order to determine the current commercial value of every plot of land, and that, in a country where land speculation is rife, would easily be a fictitious value. A plot of land lying outside the town and at the moment not built-up and therefore able at the moment to bring in only an agricultural income, but beside which stood a tenement house, would be valued as building land for a smaller house. Thus the land tax valuation would in a manner of speaking authorise a fictitious value and thus tend to assist the process of land speculation.

In England, as in Denmark, there are zealous advocates of land taxation. It must appear rather surprising that one of their arguments in favour of the taxation of land values is that so much land in England is not subject to building development merely, in their opinion, because it is taxed only as agricultural land. If there were a land tax, and if the land adjacent to built-up areas were taxed as building land, the owners would at once be forced to get it built on. For we Danes, who are suffering precisely from the fact that so much of our land is valued excessively highly owing to the tempting prospect of it becoming town building land, it appears that the English are extremely fortunate in having their undeveloped land regarded as agricultural and able to be valued as such. It is this which has made it possible for the English town planning acts to stipulate that certain areas must, without compensation, be preserved as un-built-up areas, as "green" areas, while in other areas building must be restricted to a certain density.

Although in England, even with its very large towns, it has been possible all along to obtain land cheaply enough to make possible the building of single-family houses, this has not happened as the result of any public attempts to suppress land speculation. One of the most important reasons is the peculiarly English credit system, which encourages building speculation, while the Danish system encourages land speculation. In England the credit facilities are to a great extent directly available to the prospective owner-occupier, who is also interested in the highest possible rental value and hence land value. The English building societies, which have played a decisive part in English house building, do not correspond—in spite of their name—to the

Danish building or housing associations: they do not occupy themselves with building, but with the provision of capital to those who wish to build. They try to encourage home-ownership and general thrift by bringing into contact investors and borrowers. The investors, who are either members shareholders or simply depositors, provide the money, which is employed as a loan for building. The building societies, from their large resources, are always in a position to provide loans to those who wish to build their own home. This productive process increases the national wealth, at the same time employing labour in the production of new assets. About 50 per cent. of the total loans consist of sums of less than £500, and 80 per cent. of sums under £1,000, in other words in the great majority of cases it is small houses which are being aided, houses for the more prosperous workers or for people of the lower middle classes. The loans are issued in cash and are as a rule up to 75 per cent. of the value of the property (occasionally right up to 90 per cent.). They are repaid in quite a short term of years, frequently of the order of ten years. Interest rates are determined by the current demand for loans. The Englishman who is building a house does not, therefore, suffer the risk of money-market fluctuations while the house is under construction, since he receives ready money; on the other hand he is subject to possible fluctuations in the cost of living in relation to the annual payments which he is committed to in the future. Originally the building societies were associations of people who wished to save up money in order to build themselves houses. When all the members had become equipped with a house the society would cease to exist. The change took place about the forties of the last century, when the societies began to accept members who simply wished to have a sound investment for their money, but did not themselves wish to build a house.

In recent years a marked tendency towards concentration has taken place. The number of societies has decreased at the same time as their funds have increased. At the moment (written about 1934) their capital is so large that they are having to look around for new fields of activity. In particular they are considering making loans for even smaller houses than hitherto, although this would be a less safe investment. To do this they can obtain guarantees through the local authority. By means of low rates of interest and longer amortisation periods and with the guarantee from the local authority they hope to make their capital available for even the smallest borrower who wishes to build himself a home.

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ARCHITECTURAL ASSOCIATION SCHOOL OF ARCHITECTURE

SCHOLARSHIPS IN ARCHITECTURE, 1946

The Council of the Architectural Association announce the award of the following Scholarships in Architecture at the Architectural Association School of Architecture :—

The Minter Open Entrance Scholarship (value £90), Mr. R. G. Harris (Cambridge).

The Sir Walter Lawrence Open Entrance Scholarship (value £90), Mr. P. J. Lord (Welwyn Garden City).

The Metal Window Scholarship (presented by the British Metal Window Manufacturers' Association, Ltd., (value £75 per annum), Miss D. R. Leigh (Edgware, Middlesex).

The Pilkington Scholarship (presented by Messrs. Pilkington Bros., Ltd. (value £75 per annum), Mr. T. De Pont Davies (Whitstable, Kent).

The Cement and Concrete Association Scholarship (presented by Cement and Concrete Association, (value £75 per annum), Mr. M. D. Willis (Worcester).

The Natural Asphalte Council Scholarship (presented by The Natural Asphalte Mine Owners' and Manufacturers' Council) (value £50 per annum), Mr. D. H. Hiscock (Gravesend, Kent).

The Northern Aluminium Scholarship (presented by the Northern Aluminium Company) (value £50 per annum), Mr. J. A. Holderness (Watford, Herts).

The Patent Glazing Scholarship (presented by the Patent Glazing Conference) (value £50 per annum), Mr. J. R. Plincke (Woldingham, Surrey).

SENIOR ENTRANCE SCHOLARSHIPS OPEN

The Council offer the following scholarships in architecture, the date for submission of applications being until Monday, 22 July 1946. Full particulars and application forms may be obtained from the Secretary, Architectural Association, 36, Bedford Square, London, W.C.1 :—

The Metal Window Senior Scholarship (value £50 per annum) (presented by The British Metal Window Manufacturers' Association, Ltd.).

The British Plywoods Scholarship (value £50 per annum) (presented by The Association of British Plywood Manufacturers).

The Scholarships, which are tenable for two years at the A.A. School of Architecture, are open to students of British nationality who have passed the Intermediate Examination of the R.I.B.A., either externally or at another recognised school of architecture, and are for entry to the fourth year of the course, and, subject to satisfactory progress by the student, will be renewed for the fifth year.

THE ARCHITECTS' BENEVOLENT SOCIETY

ANNUAL GENERAL MEETING

In the absence of the President, Sir Percy Thomas, O.B.E., Mr. H. S. Goodhart-Rendel, vice-president and hon. treasurer, presided at the annual general meeting of the Architects' Benevolent Society on 1 May at the R.I.B.A.

Sir Charles Nicholson, hon. secretary, in presenting the report for 1945, spoke of the steady progress of the society in spite of adverse circumstances. In referring to the value of the Maurice Webb Memorial Fund, which enabled the Council to help exceptional cases of hardship, Sir Charles reminded the meeting of the great work Mr. Webb had done for the society in his lifetime, including the inauguration of the insurance scheme, which had been a great asset to the Society.

Mr. Goodhart-Rendel, in presenting the accounts and moving the adoption of the annual report, statement of accounts and balance sheet, said that the record result of the Half-Crown Fund had been most valuable, but that what the society really needed was more annual subscribers. The society could do far more if the architectural profession would support it more liberally. He referred to the Government proposals for National Insurance, and their probable effect on the Society's work. This had already been considered by the Council, who would continue to study it when the Act came into force. There were always holes in any national scheme through which some people would fall, and many of the cases dealt with during the past year might well come within this category. There would always be scope for the voluntary society, and its actual usefulness would not diminish, though the help given might need to be exerted in different ways. The Society would therefore need money just as much as ever, and he hoped that members of the profession would support the work as generously as they were able.

Officers and Council for the year 1946-1947 :—

President : The President of the Royal Institute of British Architects, Mr. L. H. Keay, O.B.E., M.Arch.

Vice-Presidents : Sir Harry Vanderpant, Barrister-at-Law [Hon. A.], Sir Banister (Flight) Fletcher, D.Litt., F.S.A., F.S.I. [P-P.], Sir Charles A. Nicholson, Bart. [F.], Mr. H. Greville Montgomery [Hon A.], Mr. H. S. Goodhart-Rendel [P-P.], Mr. W. H. Ansell, M.C. [P-P.].

Ordinary Members : Mr. J. A. Slater [F.], Mr. L. Sylvester Sullivan [F.], Mr. Charles Woodward [A.], Mr. S. Phillips Dales [F.], Mr. J. Stanley Beard [F.], Mr. G. D. Gordon Hake [F.], Mr. G. H. Lovegrove [F.], Mr. A. L. Roberts [F.], Mr. A. E. Wiseman [F.], Dr. C. H. Holden [F.], Mr. C. H. James [F.], Mr. A. B. Knapp-Fisher [F.], Mr. H. Liddetter [F.], Mr. D. L. Solomon [F.], Mr. Francis Jones [F.] (representing the Manchester Society), Mr. C. M. Hadfield [F.] (representing the Sheffield, South Yorkshire and District Society), Mr. Ernest Bird [F.] (representing the Hampshire Society), Mr. Arthur C. Russell [L.] (representing the Essex, Cambridge and Hertfordshire Society), Mr. B. M. Ward [F.] (representing the Liverpool Society), Mr. Cecil Burns [F.] (representing the South-Eastern Society), Mr. R. A. Cornell [L.] (representing the West Essex Chapter, Essex, Cambridge and Hertfordshire Society), Mr. Norval R. Paxton [F.] (representing the West Yorkshire Society), Mr. J. R. Leathart [F.] (representing the Architectural Association), Mr. W. H. Scanlan (representing the Institute of Registered Architects), Mr. F. G. Sainsbury [L.] (representing the Incorporated Association of Architects and Surveyors), Mr. E. Hadden Parkes [F.] (representing the Mount Pleasant Artists' Rest Home), a Representative of Architectural Students.

Extracts from the Annual Report

Pensions and Grants.—One hundred applications were dealt with during the year, of which twenty-seven came from architects or assistants, sixty-two from widows, and eleven from orphans. Several former applicants wrote to express their thanks for past help, and to say that they were now able to manage without the Society's assistance. On the other hand, there were fourteen new cases, some of great urgency.

A grant was made from the Maurice Webb Memorial Fund to the widow of an architect for help with the education of her daughter.

Two of the Society's pensioners died during the year, and the vacant pensions were awarded to two architects, one now disabled and the other stone deaf and an invalid.

Finance.—There are still less than a thousand regular subscribers, which is too small a number to enable the Society to give help on the scale needed, and is not a creditable proportion of a profession which numbers over 14,000 on its register. The Council is most grateful to those who support its work, whether by subscriptions or by periodical donations, and hopes that they will try to increase their numbers by persuading their friends to contribute.

The income from investments has increased during the year, owing to the generosity of deceased members, who remembered the Society in their wills.

A further source of additional funds has been the scheme for payment of subscriptions under seven-year covenant, whereby the subscriber does not pay any extra, but the Society reclaims the tax, and thus doubles the subscription received. Several more members have signed covenants during the year, thus adding a substantial amount to the Society's resources. Still more covenants would be welcome.

Among donations received, the Council wishes to express its thanks for further gifts of £52 10s. each from the Incorporated Association of Architects and Surveyors and the Institute of Registered Architects, £50 from the South-Eastern Society of Architects in addition to £5 5s. each from three of its Chapters, £36 from the A.A. Students' Club including proceeds from the sale of programmes at their annual pantomime, £21 from Mr. W. Henry White, £20 from Mr. L. Sylvester Sullivan (to the Maurice Webb Memorial Fund), £10 from Mr. C. D. Collins, £7 7s. from Mr. H. D. Hendry, and special donations of £5 5s. from the Institute of Registered Architects and £4 4s. from the Buyers' Association of Great Britain in memory of the late Mr. W. O. Hudson. The Council also offers its thanks to all the Allied Societies and other organisations and offices, especially the West Yorkshire Society of Architects, the Bradford City Architects' Department, and the Architect Members of the War Damage Commission, who have collected and sent contributions towards the Society's funds.

Half-Crown Appeal.—The President's Appeal for the "Half-Crown Fund" was issued just before Christmas, and produced a most encouraging response. £943 1s. 4d. had been received by the end of the year, and later donations brought the total past £1,000 for the first time since the Appeal was originated. Valuable co-operation was given by the R.I.B.A., the Architects' Registration Council, and the Institute of Registered Architects, who sent out the Appeal as an inset in their Bulletin, with a supporting letter from their President. The technical Press, including *The Architect and Building News*, *Architectural Design and Construction*, *The Architects' Journal*, *The Architectural Association Journal*, *The Builder*, *Building*, and the *R.I.B.A. Journal*, most kindly gave space for the Appeal in their Christmas issues. The Council is most grateful for this help, which is especially valuable during the present paper shortage which so much restricts publicity.

Insurance.—The amount of commission received from insurance has been greater than in the previous year, partly owing to the return of private motor traffic and the increased interest in house purchase. The amounts thus received in commission from insurances taken out through the Society's agency are a most valuable addition to the Society's funds.

In connection with insurance, the Council wishes to express its thanks to *The Architects' Journal* and *The R.I.B.A. Journal* for free advertisement space of considerable value during the year.

TOWN PLANNING IN ALGERIA

A Paper by Mons. Tony Socard, Director of Town and Country Planning in Algeria, Read at the R.I.B.A. on Thursday, 30th May, 1946

Mr. A. W. KENYON, [*F.*] in the Chair

The R.I.B.A. have done me the honour of asking me for an account of the position of town-planning in Algeria. I will first tell you of the very particular conditions prevailing in that country, and then of the problems which specially affect me; the organisation of the countryside, industrial development, and the planning of towns is in a state of rapid, not to say explosive growth.

Thanks to the kindness of the British Council and the help given by Mr. Austin Gill, we have received a remarkable documentation on town planning activities in Great Britain. This explains the fact that, although it remains within the limits of metropolitan legislation, Algerian town planning may, in its application, appear to be slightly tinged with British influence. I say "tinged" because in actual fact the geographical and social conditions of Algeria are so very different from those of Great Britain that some of you may hesitate to recognise the vigorous child which I am about to present to you.

Algeria belongs to that *œkumenon* whose physical unity was foreseen by the peoples who inhabited it in ancient times—Aegeans, Phœnicians, Greeks and Romans. With the exception of Egypt, which stands apart, and is perhaps more African than Mediterranean, the countries which surround "mare nostrum" are invariably mountainous, precipitous, and difficult of access. Constantine, Mostaganeon and Mascara are built on peaks; Oran occupies a site which is relatively flat for Algeria, but an eighty-metre cliff separates the town from its port. Algiers consists of a narrow coastal strip wedged between the sea and the heights of Sahel, and, in order to leave it, it is necessary to scale passes of an altitude of 1,000 metres, or to use the extremely narrow, winding gorges; Bone appears favoured by its immense horizontal plain, but the endemic malaria which reigns there—to which St. Augustine was a victim—will necessitate an energetic policy to transfer the city to the mountains which border it, rather than to allow it to extend lazily into the plain.

Such sites present difficult problems to the establishment of human communities. From the earliest times, they have developed the ingenuity of man, and forced him to adapt himself, and this explains the uniform character of Mediterranean settlements. It may be said that from Spain to Syria, from the coast of Provence to Algeria, the same type of city reappears throughout. It is characterised by its picturesque position on a steep site, by the clarity of its sculpture, by the utilisation of the smallest flat spaces, thus resulting in the impressive silhouette of a castrum, and in sober grandeur, with sharp contours resplendent beneath the sun. Kabylia, L'Ames, and the land of Beni Sous to the south of Themeen have, in particular, retained this residual character. Residual it is indeed, for Strabo had already removed the wild aspect and set up Ligurian settlements on the Genoese coast, and even in his time they seemed to him extremely ancient. With more highly evolved peoples, this aptitude for embracing the site became further developed, and flowered into the Greek art of adaptation to contour, which aims at effects of balance, oblique perspectives and expressive angles of vision, rather than at an impossible symmetry.

Another constant factor in the Mediterranean is the climate, sunny, and extremely attractive to northern people but a difficult climate, and one which the men who live in it have to combat. Mild in winter and hot in summer, it is characterised by an abundance of rain throughout the cold season and by extreme drought during the summer (two or three millimetres a month). When these winter rains extend but a little at the time of growth, or when the drought is but a little early, the harvests are lost, either because of the sun or the rain. We are here at one of the boundary lines where the efforts of the cultivator meet with their rewards.

These hard conditions have stimulated the spirit of invention. To counter the irregularity of the seasons, recourse has of necessity been made to irrigation, a specifically Mediterranean technique, with various forms of procedure, which all aim at the extraction of nourishing water from an avid soil; countless small weirs in the ravines of the "Oueds," artesian wells (Biskra area), foggaras, which are subterranean channels for conservation, extended for long distances to collect water from the sand dunes—for dunes are like wet sponges—and finally, great modern dams. However, these measures against the irregularity of the climate require much care and maintenance. Increases in the number of artesian wells cause a fall in the supply of subterranean water, the little weirs are often demolished by torrential floods from the mountains, the foggaras collapse, and desert specialists are often obliged to descend through the holes which line their courses to repair them, and the great dams are silted up by the violent erosion which attacks the mountains.

The reward of these great labours, if the difficulties are overcome and if the weather is favourable, is a magnificent harvest, due to the action of the sun-Apollo in the dual role of destroyer and benefactor.

It will be understood that the inhabitants have been influenced by these difficult conditions. They explain a similarity of social forms which is extremely ancient. The interest of Algeria, and of Algiers in particular, is that it presents the juxtaposition of a modern life—ours—and an ancient way of living—the fruit of age-old experience, and adapted to the country. A grave Arab in his djellaba, pacing slowly among the ruins of Djemila or Timgad, looks like a Roman in his toga—a somewhat grubby toga. Hence the possibility of some tangible and constructive comparisons.

The native population is evolving very rapidly. About 1925 a fact became apparent which did not attract publicity, but which may produce some very important consequences. Owing to the popularisation of hygiene, the infant mortality rate suddenly fell. The native population, which numbered 1.5 millions in 1830, and 5.5 millions towards 1925, has now reached eight millions, with an annual increase of 150,000. Against this there are one million Europeans. The native population is now migrating in masses towards the towns. This is quite a new development.

Islamic or Turkish Algeria had hardly any proper towns. The Berbers were almost exclusively rural, and hence not progressive. The towns were peopled by foreigners, Moors expelled from Spain, or Turks. There was certainly no confidence between the towns and the countryside. Until our arrival, the Kabyls were forbidden to stay in Algiers for the night, and were obliged to cross the ramparts at dusk. A great Algerian geographer, Gautier, has expressively described these towns beleaguered in the midst of the country.

The new movement towards the towns may be explained by the insufficiency of rural resources for an enormously increased population, by the persistence of cultural methods of great antiquity but of low productivity, and by the attraction of urban surroundings, where the native has the impression of escaping from the hold of the ancestral soil and Moorish conservatism to evolve and to educate himself. This movement raises the principal rural industrial and urban problems which I

am going to place before you. However, a few precautions are necessary.

In many villages, particularly in Kabylia, there exists a very curious and ancient form of democratic administration, the Councils of Elders, or Djemas. The French administration had undertaken to stimulate their evolution into the form of our Municipal Councils. This is a delicate task, for nearly all these villages are divided into two hereditary clans, vowed to fierce hatred, the "cofs" which persist in Corsica and in Dalmatia, which were formerly a part of the structure of social organisation in the Mediterranean, and of which the conflicts between Guelphs and Gibellines, Capulets and Montagues are but manifestations.

I must add that this population, although very religious, does not represent orthodox Islam. Their cult, particularly amongst the women, is still full of strange practices and superstitions which are like a sediment left in the human soul by vanished religions. The hand of Fatima seen on all native doors, appears to be of Phœnician origin; the cult of Amphitrite and Neptune, so often illustrated by Roman mosaics in Africa, has a distant ancestry in Crete; and at Dougga in Tunisia, near the Algerian frontier, we find the swastika, a solar symbol whose origin is lost in the Neolithic night.

The improvement of agricultural methods, the increase of harvest yields, and the attachment of the peasant to his land constitute our most important problems. To meet them it is necessary to revise and develop social activities, to introduce a minimum of commodities, and above all to educate, by means of model farms and schools.

In the small villages the schools are negligible. These schools, consisting of one class, in which the child is given practically the same teaching throughout his school career, must be abolished, particularly as the native child, like all primitive people, is remarkably quick to learn. A more graduated, progressive and varied education may lead him to that modern mentality which exercises an incontestable prestige over him. For this purpose, large schools, with six classes for boys and as many for girls, of 300 pupils at least, seem necessary in the country districts. Consequently, we must proceed to a regrouping of rival settlements round the school in units of a minimum of 2,000 inhabitants. Similarly, commerce cannot develop normally without an adequate custom at its disposal, that is to say, fairly large settlements. A normal social life, too, only seems possible in considerable communities.

These demands of human economy, to borrow the expression of Dr. Sand, present serious problems to town planners. It is hoped to solve them in the grain regions (the High Plateau) by the mechanisation of agriculture, which would allow the extension of the cultivatable perimeter round the regrouped settlement; and in the mountain districts, by the co-existence with the rural population of a population of craftsmen, often highly skilled.

An interesting experiment is at present being conducted in the Hodna, where some villages were destroyed in the 1946 earthquake. The object is to regroup the population centred round the olive groves on the dry land, together with market gardens in the areas served by small weirs of an Alpine type. The unit adopted is of about 2,000 inhabitants.

Another experiment being studied in the Bone plain is taking the form of mechanised agriculture, somewhat reminiscent of the Kolhoz, for here the product in question is grain. The work of drainage is pursued by modern methods, and the regional plan, extended to the country and the forests, embraces an area of 120 kilometres in length by 30 in width.

I must add here that life in the important rural centres does not run contrary to the habits of a population which comes mainly from Languedoc, and partly from Southern Italy, where large villages are the rule, and also that the collective spirit is much encouraged here. Algeria is the promised land for co-operatives of all kinds.

Planning the Algerian countryside is essentially a problem of regrouping the villages, given a certain re-allocation of the land. Thus, the aspect is very different from that of the English countryside.

In the towns, the problems are different. Algiers has 500,000 inhabitants, Oran nearly 400,000, Constantine and Bone more than 100,000. The necessity of procuring means of existence for these populations leads us to envisage industrial development.

Algeria already possesses numerous and important factories, producing building material and foodstuffs. She also exports raw materials, iron and phosphates. However, there is a scarcity of coal and electric energy, and this would seem to limit her capacity as an industrial power. Yet the export of bulky raw material may provide her with a return freight for the coal she lacks.

It is a new country where everything is yet to be done. We are not hampered by numerous industrial establishments as you are in England, the oldest industrial country. The principles elaborated by the Town Planning Commission to the General Government seem for this reason to differ considerably from those which I have observed in English town-planning projects.

These principles are:—

1. Concentration of factories into zones of 200 to 400 hectares in the vicinity of ports, in contact with railways and motor transport routes, in low, unproductive land. In this connection, I have a confession to make to you. On seven occasions, in different parts of England, I have observed town planning projects which called for a number of industrial areas, reduced, sub-divided and built close to residential quarters. When I expressed astonishment at this arrangement, which offended my sense of logic and my respect for hygiene, seven times I received the same answer: "We will only have light industries." I asked myself where the unfortunate heavy industry would find refuge. In Algeria we have not felt obliged to retain this distinction. There is nothing to guarantee that an industry said to be "light" may not, in the development of its business and in the processing of its by-products, have cause to emerge from the category of harmless industries into that of inconvenient, unhealthy and dangerous industries. According to the English plan, it will then be placed in a position where it will either be transferred, which would constitute a dead loss of invested capital, or, which I think more probable, the regulations will be disregarded. In any case, it seems to me that this distinction is sowing the seeds of some difficult obstacles for English town planning.

2. Separation of factories and residential areas by deep green belts, several hundred metres wide. These belts to be used for cultivation, for workers' gardens, and for recreation grounds.

3. Selection of open hillsides, for the establishment in their proximity of residential localities of approximately 40,000 inhabitants, linked in units of dwellings, neighbourhoods and boroughs. This plan has been adopted, not only by you, but also by America and the U.S.S.R.

Projects on these lines are being planned at Algiers, Oran and Bone. At Oran, 120 hectares have already been conceded. In the region of Algiers, the establishment of the first industrial zone of 400 hectares is to begin this year, and, owing to agreements reached by the various governing bodies, most of the land reserved for the green protected zone has already been acquired by Algeria.

And now, what will be the appearance of our towns, on these difficult terrains, with a very mixed and easily influenced population, in the crisis of rapid growth which has overtaken this ancient country? To the principle of hierarchic regulations which we have adopted, we have added methods of calculation which allow town planners to accord the necessary space to various requirements. Our technicians prepare their projects—there are, at the present moment, about 40 of them at work—following these regulations, which give them widely varying results. However, we hope by this means to omit nothing, and not to be obliged to improvise a solution at the last moment because some unexpected need has arisen.

Another inquiry has been concerned with the best possible distribution of the population between blocks of flats and villas. In Algeria we have none of the English dislike for living in flats, and this is a Mediterranean characteristic. Nevertheless, large families usually prefer villas, because of the amenity which a private garden offers to children. We have tried to combine both in each neighbourhood, according to the proportions which have emerged from precise statistics of the composition of workers' families, and according to the preferences of the inhabitants. In Oran, for example, flats predominate, and there are few villas. I believe that this is not only because the outskirts of Oran are less pleasing than the verdant Sebel of Algiers, but also because the former town is mainly of Spanish origin, whereas the capital is chiefly French.

To these ideas, I must add a rough description of the principal schemes adopted. Algiers, on a narrow coastal strip between the sea and the mountains, began by extending 12 kilometres in length— then scaled the hills of the Sahel and now stretches over 20 kilometres. The plan envisages an industrial extension into the plain of Mitidja, on two axes served by railways, and whose point of convergence will be the Maison Carrée junction. Residential areas in the vicinity are envisaged. On the plateaux of the Sahel we will try to develop satellite cities separated by broad open spaces.

Oran has the appearance of a saddle between two accentuated hills, the Murdjarjo and the Mountain of Lions. The principal road leading to it crosses the railway at several points, thus causing bottlenecks. It seemed simpler to divert it entirely, starting from Ste. Barbe du Tlela, which it avoids. It will cross the hills, and the majestic alley descending along a gentle slope will proceed to the white city visible in the distance, dominated by the sea in its frame of mountains. This panorama of African grandeur calls for adequate description. The road will run straight for 13 kilometres, impressive in its deliberation, and strips of land, free from building and 200 metres wide, are envisaged on either side. In an immense circle round it, it is proposed to place the segregated industrial groups, and the residential areas in the hills.

At Bone, we are trying to develop the residential and business quarters towards the mountains. A scheme like that of the Crescent at Bath seems to me likely to suit this terrain. In the plain, several groups of factories will be divided by rich cultivated land at the foot of the high hills reserved for residential quarters.

Constantine, on its spur enclosed by the meandering Rhumel, presents, like all sites of this nature, a landscape of contrasting masses, owing to the differences of orientation in its surroundings.

I will summarise these different traits in one sentence to counter the unexpected which is so common in the Mediterranean. We are trying to space out our cities by means of satellite towns, solidly grouped and adequately served by a system of road, and with green belts in between. But unlike the English system which proceeds in gentle gradation from town to country, in Algeria we want the town to retain its urban character and to contrast strikingly with the country, thus creating landscapes of concreted masses beneath the African sun. In this lies the great beauty of these regions, and all those who are familiar with the South know the grandeur of this well defined and contrasted scenery, where the white terraces abut on to a sea of palms, where the line of palm trees ends suddenly as the desert begins.

In town planning, where we are working on a time scale exceeding a human lifetime, on a social-official scale, it is probable that the conservation of open spaces will eventually cost much less than disorder and lack of foresight. Spacious planning remains the best way of retaining suppleness.

The paper was read by the Chairman.

DISCUSSION

MR. C. STEWART: Could the speaker give me some idea as to the approximate size of the village communities mentioned in his paper? Are these villages comparable to the English village for size, or are they smaller or larger? And what is the average population of these communities?

M. SOCARD: As regards population, this varies from anything between 1,500 and 5,000. Many of these villages, as you see, are much larger than English ones.

MR. E. GOLDFINGER: Are the satellite towns individual towns; that is, do they have their own industry and commerce, or do they merely answer the purpose of dormitories to the large towns?

M. SOCARD: They are neither the one nor the other. Our satellite towns will not be linked up with their own industry but we shall, of course, retain the maximum of flexibility. As a rule, several satellite towns are situated around the industrial centres and so placed that the inhabitants can conveniently stay there. In Algeria you will not find the close liaison which exists between industrial and residential quarters in this country. The garden city is a most interesting experiment, but in Algeria it would be extremely difficult to compel people to live and work in the same place, and for that reason we shall not go too far in that direction.

Then there is another aspect to be considered, namely, that the population is a fluctuating one; numbers of natives come and work in the factories for five or six months in the year and then return to their homes to deal with the harvest. Conditions in Algeria are so different from what they are in England that it is difficult to make a satisfactory comparison.

And now I wonder if there are any questions to be raised on our scheme of setting up industrial towns absolutely apart from the residential districts. That is a very different thing from what is being done in this country. Could we have a discussion on this?

MR. E. GOLDFINGER: We hold the opinion that the worker should live within walking distance of his work. It is not desirable for him to live too far away from it.

M. SOCARD: Fifteen to twenty minutes' walk is a reasonable proposition. That is not excessive and it is a figure we have adopted somewhat generally. By bicycle that would mean half the time and with regard to distance it would represent 1½ to 2 km. In principle, however, we keep residence and factory apart; aiming at some 300 m. between the two. But, of course, there are other factors which enter into the problem and must be considered.

I have seen Plymouth and there you have a very definite separation of industries and residential districts. I have also seen Bath, where you find, to a certain extent, both arrangements. At Exeter they are developing a very interesting plan for their industrial mass, although there is a certain amount of dispersion around the mass which is unfavourable to the main scheme.

At Welwyn, on the other hand, you find a small town of some 8,000 inhabitants which is to become a satellite town of 50,000. I do not know how this will be effected, as there does not appear to be sufficient space available for it. Welwyn has a small industrial zone which cannot easily be made to accommodate 50,000, and the scheme will necessitate putting up other industrial zones in the neighbourhood of the residential part, and that will be a great pity. Welwyn was highly successful as a garden city and it seems unfortunate to make this change.

MR. STEWART: It seems to me that heavy industry is generally prelocated by reason of its being heavy. When M. Socard was questioning the authorities he mentioned, he was presumably questioning them in areas where there is no likelihood of heavy industry being developed. Our heavy industries are already located and are immobile, and the possibilities of a light industry becoming heavy seem to me very unlikely.

M. SOCARD: Light industry may constitute a nuisance and be unhygienic. For instance, at Algiers a paper factory is to be set up. For the present it will be placed in the third category, that is to say, an industry which is a nuisance. Later the factory will probably use potent poisons and will then be placed in the second category as an unhealthy industry or even in the first one as a dangerous one. If it were a light industry it would not be allowed to remain there, it would have to be transferred to another district, though such a transfer is unlikely, as the enterprise in question is powerful enough to infringe the regulations and remain where it is.

As commerce goes on developing, many industries have to change their manufacturing processes and in so doing they pass from the

harmless into the dangerous category. If you were to examine the Nomenclature published by our Minister of Public Health, you would realise how complicated this whole question is and how many factories are constantly being removed from one category and placed in another.

There are not many heavy industries in Algeria but quite a number of factories do constitute a nuisance, for instance, distilleries. These belong to the first category because of the smells produced and because of the pollution of neighbouring water caused by these factories. Where their drains run into fishing streams, the fish die off.

The CHAIRMAN: It seems to me that an industry may well become an unhealthy one, but it cannot be changed into a heavy one. We look upon iron and steel as the heavy industries and they cannot change much; distilleries or soap factories might well become dangerous.

MR. STEWART: "Obnoxious" is the word to be used, rather than "heavy."

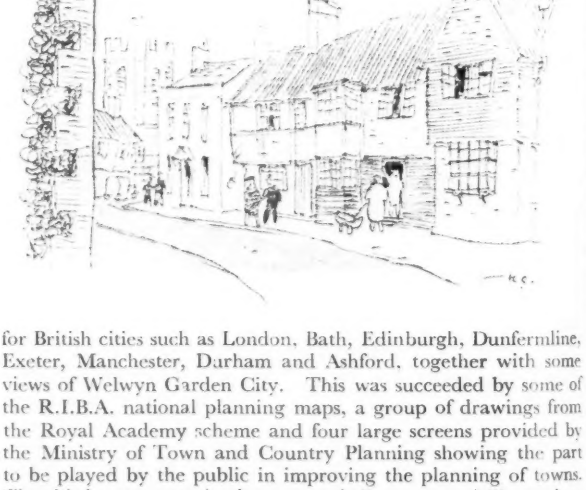
RE-PLANNING OF BRITAIN

Exhibition in Stockholm of British Town Planning

The British Council, with the help of the R.I.B.A., has just opened in Stockholm a most successful exhibition of British town planning. This has been the work of an *ad hoc* committee, with Mr. A. W. Kenyon [*F.*], chairman of the R.I.B.A. Town and Country Planning Committee, in the chair. The members were:—Major A. A. Longden (British Council), Professor Sir Charles Reilly [*F.*], Mr. E. J. Carter [*A.*], Mr. A. Chitty [*F.*], Mr. A. G. Ling [*A.*], Mr. R. H. Matthews [*A.*], Mr. R. Walker (British Council) and Miss M. McLeod (secretary). The exhibition was designed by Mr. Ralph Lavers.

The exhibition tells the story of Britain's present effort in town planning, re-planning and re-housing, mainly in photographs and models but with some diagrams and drawings. It was opened by the Swedish Minister of Transport with several British architectural representatives in attendance, of whom Professor Sir Patrick Abercrombie was the principal speaker. The principal Swedish architect speaker was Mr. Hakon Ahlberg, who had been mainly responsible for the Swedish end of the organisation. The exhibition was staged in the Liljevalchs Konsthall, pleasing and typically Swedish feature being the holding of a dinner party in the exhibition itself. There was a very good Swedish press and a broadcast in which Mr. Ahlberg and Major Longden took part.

The exhibition began with Ordnance Survey maps showing the distribution of the population according to industry. These were associated with photographs of various typically British activities, including working in factories, visiting cinemas, playing cricket, using public transport, agriculture, etc. There followed a series of landscape views of England and Scotland. The second room was lined with large screens which gave some account, mainly in photograph form, of the re-planning schemes



for British cities such as London, Bath, Edinburgh, Dunfermline, Exeter, Manchester, Durham and Ashford, together with some views of Welwyn Garden City. This was succeeded by some of the R.I.B.A. national planning maps, a group of drawings from the Royal Academy scheme and four large screens provided by the Ministry of Town and Country Planning showing the part to be played by the public in improving the planning of towns. The third room contained some road diagrams and illustrations provided by the Ministry of Transport and a series of screens illustrating recent history in the housing of the people of Great Britain, provided by Mr. F. R. Yerbury [*Hon. A.*].

The exhibition is to be moved to Rotterdam, where it will be opened on 6 July, and afterwards proceeding to Copenhagen, where it will be shown in August. The drawings on this page are taken from the very charmingly produced catalogue and were the work of Mr. Hugh Casson [*A.*].

PRACTICE NOTES

EDITED BY CHARLES WOODWARD [*A.*]

IN PARLIAMENT

Civil Service (Control of Engagement Order)

In answer to a question the Financial Secretary to the Treasury regretted that he was unable to say how soon the efficient conduct of public business would permit of the Control of Employment (Civil Servants) Order 1945 being relaxed. (14 May 1946.)

Requisitioned Property (Compensation)

Asked whether he will consider introducing an amendment to section 2 (1) (*b*) of the Compensation (Defence) Act 1939 so that compensation in respect of requisitioned property shall be assessed on the basis of cost at the time when the repairs can be put in hand, the Chancellor of the Exchequer replied in the negative. He said that the law provides that compensation shall be paid, whether or not the damage is made good, at the prices ruling at the date of de-requisition. That seemed to him reasonable. Asked further whether he was aware that the difference of over 10 per cent. between the compensation paid on identical properties if they were de-requisitioned on 31 December 1945, or 1 January 1946, and the general increase in wages and the cost of materials, created a serious hardship, and that this purely arbitrary action by the War Office made a great difference to private individuals and whether something could be done to remedy the position, the Chancellor replied that he would have another look at the matter, but was inclined to think that the present arrangement was, on the whole, as reasonable as one could get. (21 May 1946.)

Building Requirements (Ordnance Factories)

In answer to a question the Minister of Supply said that the Royal Ordnance Factories are at present manufacturing such items as pressed steel fitments, cupboards and taps. Preparations were well advanced for them to produce ceramics and electric and gas cookers. The production of pre-cast concrete for permanent houses and structural components for the aluminium house was also under consideration. It would not be appropriate to publish production details. (21 May 1946.)

Prefabricated Houses

In answer to a question the Minister of Health said that arrangements had been made directly by the Government for the production of prefabricated houses only in respect of Howard houses, B.I.S.F. houses and Airey Rural houses. For all other types of permanent prefabricated houses local authorities obtain tenders in the same manner as they obtain tenders for traditional houses. 1,400 Howard houses and 18,906 B.I.S.F. houses have been allocated to local authorities. Figures of the demand for Airey Rural houses are not yet available. Tenders have been approved for 2,566 Easiform houses, for 1,098 Orlit houses and for 2,374 permanent prefabricated houses of various other types. Up to 30 April, 5 Howard, 54 Easiform and 2 Orlit houses had been completed. (21 May 1946.)

Repairs (Stock Replacement)

Asked if provisions were made for the replenishment to builders' merchants of stocks used in providing materials to private persons carrying out private building work or repairs under the non-licence limit of £10, the Minister of Works replied that priority is already granted for the replenishment of stocks used for urgent sanitary repairs, repairs to safeguard structural stability and repairs required under statutory notice. The replacement of materials used for non-priority work must be subject to the satisfaction of priority demands (21 May 1946.)

Regent's Park Terraces

In answer to a question the Minister of Works said that contracts for the preparation of houses in Regent's Park for use as Government offices were let after limited competition based on bills of quantities. The estimated cost of the work averaged £112 per head of staff to be accommodated in these buildings. Although a large proportion of the work involved covered repair of war damage, and the making good of subsequent deterioration, the cost of the resulting accommodation compared favourably with that provided by any other means. (21 May 1946.)

Large Houses (Conversion to Flats)

In answer to a question the Minister of Town and Country Planning said that it is the Government's policy to encourage in appropriate cases the conversion of houses into flats. Local planning authorities may, however, limit the period of time during which the flats may be used, in order to prevent prejudice to their longer-term planning requirements. But in determining the period of time, they should take into account the capital expenditure incurred by the developer. Asked further whether he was aware that licences were being issued by the London County Council with a limiting period of 14 years, and did he not agree that that policy did not allow flats to be converted out of old Victorian houses, and was definitely not helping the existing housing shortage, the Minister replied that it was always open to a developer who was dissatisfied with a decision of the London County Council to appeal to him. (28 May 1946.)

Ministry of Health Circulars

91/46. 7.5.46. This circular addressed to all local authorities gives guidance in connection with the acquisition of land for Public Purposes under the Town and Country Planning Act, 1944, Part II and also the Eighth Schedule.

85/46. 23.4.46. This circular addressed to housing authorities in England contains a revision of architects' fees in connection with War Damage Repairs carried out by the authority, and is in substitution for the scale contained in Part II of Circular 2720.

The revised scale is the same as that issued by the War Damage Commission under paragraph 2 (*b*). This scale was published in the JOURNAL for February last, page 136.

101/46. 15.5.46. This circular addressed to housing authorities in the London Civil Defence Region gives guidance as to the minimum sizes of rooms in flats. The first bedroom should be 135 sq. ft., other double bedrooms 110 sq. ft. and single bedrooms 70 sq. ft. Actual sizes of flats can be less than houses of similar accommodation as the staircase is omitted and wash-houses and utility rooms are usually provided as communal services. The Minister considers that it should be possible to provide bedrooms of the minimum size and adequate living room and service accommodation within the following areas :—

Rooms	Persons	Sq. ft.
5	7	950
4	5	850
3	4	700
2	2	500

These measurements are within the containing walls and exclude the areas of balconies, whether external or internal, staircases and communal facilities.

It is pointed out that flats are generally more expensive to build than are cottages and the local authority before putting forward their proposals will doubtless have very careful regard to the probable cost of erection and the rents that they will need to charge.

ACTS OF PARLIAMENT

Acquisition of Land (Authorisation Procedure) Act, 1946

This Act came into force on 18 April 1946. Its object is to codify existing legislation affecting compulsory purchase of land and also to expedite the procedure in urgent cases.

In urgent cases the Minister must be satisfied that " it is expedient that the local authority should purchase any land for the said purpose and that it is urgently necessary in the public interest that the acquiring authority should be enabled to purchase the land without delay." The Minister can be the Minister of Transport, the President of the Board of Trade, the Minister of Health or the Secretary of State for Scotland. The Minister of Agriculture and the Minister of Town and Country Planning must have an opportunity of considering the site before either of the Ministers above mentioned exercise their powers under the Act.

The procedure in urgent cases appears to be as follows. The acquiring authority must serve notices on those persons who are affected by the proposed purchase, giving them 14 days in which to make representations to the Minister concerned. There is no right to an inquiry by persons lodging objections. The Minister then considers the objections and may then authorise the purchase of the land and the persons affected are notified accordingly. After seven days from the issue of Minister's authorisation to purchase the land the acquiring authority may take possession, but must do this within three months of the authorisation. Having taken possession of the land the authority then serve notices under the Lands Clauses Consolidation Act, 1845, of its intention to take the land and the notice cannot be withdrawn.

The authority must pay compensation and interest on the agreed or awarded compensation. On taking possession of the land the authority may extinguish any rights over the land, as if they had completed the purchase. This procedure in urgent cases is exercisable during a period of five years from 18 April 1946.

The Fourth Schedule to the Act contains minor and consequential amendments to 55 Acts and repeals parts of 32 Acts.

The Minister of Health has made Regulations under the Act in respect of the compulsory purchase of land. The Regulations are dated 18 April 1946 (S.R. & O. 1946 No. 573, Land, Acquisition of, Compulsory Purchase).

The Ministry of Health have issued a memorandum giving a general indication of the provisions of the Act, dated April 1946.

Housing (Financial and Miscellaneous Provisions) Act, 1946

This Act came into force on 18 April 1946. The Exchequer subsidies and rate contributions for new houses built by local authorities in England and Wales are as set out in Practice Notes in the March issue of the JOURNAL. The First Schedule to the Act contains provisions for ascertaining the value of certain sites, and the amount of contributions in respect of flats on such sites.

WAR DAMAGE WORK

Professional Fees in War Damage Work of a Repetitive Character

The War Damage Commission has decided that where for the rebuilding of groups of destroyed houses the professional adviser prepares plans of one house and these plans are used for other similar houses in the group, the fee should be calculated on the basis of paragraph 2 (*a*) of the Code of Professional Fees on the aggregate cost of the houses in the group for which the one set of plans are appropriate. This Code was published in the JOURNAL for February last, page 136.

TOWN PLANNING

Tree Planting in Roads and Streets in Urban and Suburban Areas

The Ministry of Town and Country Planning has issued a circular No. 24 dated 14 May 1946, giving guidance to local planning authorities in the planting of trees. Grants towards the cost of tree planting in connection with major improvement schemes and in the ordinary course of making minor improvements to classified roads are made by the Ministry of Transport. Appendix B gives a rough guide of the approximate cost of tree planting. Appendix A gives a list of suitable trees.

NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY

The Council has decided that as from the beginning of the first pay-week following 1 May 1946, Tool Allowances shall be paid to those apprentices in the carpenters', joiners' and plumbers' trades who are put to the expense of maintaining tools.

The Council has also decided that as from the beginning of the first pay-week in May 1946 the wage-rates for women engaged on craft processes in factories shall be 1s. 9d. per hour, and for those carrying out work other than craft processes the rate shall be 1s. 5½d. per hour.

ACT OF PARLIAMENT

Trunks Roads Act 1946

This Act came into force on 6 March 1946 and applies to England, Wales and Scotland.

As from 1 April 1946 the roads set out in the 1st Schedule to the Act are to become trunk roads. This involves an addition of 3,685 miles of road to the trunk road system.

The Minister of War Transport must keep in review the national system of routes for through traffic in Great Britain, and if he is satisfied, after taking into consideration the requirements of local and national planning, including the requirements of agriculture, that any existing road or any road proposed to be constructed by him, should become a trunk road he may make an order to that effect. He may similarly make an order that a trunk road shall cease to be a trunk road.

Roads in London that were trunk roads and were excluded under the Trunks Roads Act 1936 are now brought into this Act if they were trunk roads immediately before the commencement of this Act. The same provision applies to roads in county boroughs. The provision does not apply to roads in the City of London.

There are general provisions as to the making of orders under the Act, and the 2nd Schedule provides for local inquiries to be held where there are objections to the order either by a council or a person affected by the order. Except in the case of objection by a council the Minister may dispense with an inquiry if he thinks it is unnecessary. After consideration of the objections and the report of the person holding the inquiry the Minister may make the order with or without modification.

The Minister may make orders in respect of one-way traffic on trunk roads and also in respect of cycle tracks and footpaths in connection therewith. In this connection the Restriction of Ribbon Development Act 1935 which relates to standard widths adopted roads is not to apply, and the restriction on building within two hundred and twenty feet from the middle of the road is to be read as if the restriction related to the land forming the site of the track or path.

The Minister may by order carry out improvements which he considers necessary to effect a safer or more convenient junction between a trunk road and any other road, or stop up partially or entirely any such junction which he considers necessary in the interests of the safety of persons or vehicles. He may not make such an order unless he is satisfied that there is a sufficient alternative connection with the trunk road within four hundred and forty yards of the existing junction, or that an alternative connection is provided before the existing junction is stopped up. He may construct any road for the purpose of effecting a safe and convenient junction between a new road constructed by him as a trunk road and any road connected with a road which ceases to be a trunk road. Land acquired by the Minister in connection with these improvements becomes vested in the highway authority.

The power to acquire land in relation to a trunk road which is exercised by the highway authority under the Restriction of Ribbon Development Act 1935 to prevent building and to preserve amenities, is also exercisable by the Minister.

The Minister may construct bridges or tunnels as part of a trunk road, and bridges over or tunnels under navigable waters. The order must include plans and specifications to indicate the position and dimensions of the bridge or the tunnel as the case may be.

On 1 April 1946 every bridge which carries a trunk road is to be transferred to the Minister, and every road carried by a bridge which becomes a trunk road will be transferred to the Minister when it so becomes. "Bridge" under the Act includes the abutments and walls, and so much of the approaches as carries the road. This provision applies to bridges, including viaducts, which carry the road over any railway or road, over any canal, river water-course, marsh or other place where water flows or over a ravine, providing the bridges are not swing bridges, bridges which carry a railway as well as the road, and bridges to which is attached a right to levy tolls, or for which the highway authority is responsible for maintenance and repair.

There are provisions in the Act relating to finance and the 3rd Schedule gives the amendments to the Trunk Roads Act 1936, and the 4th Schedule the modifications of the 1936 Act as regards London.

Note.—It will be observed that under this Act it is the Minister of War Transport who is to "take into consideration the requirements of local and national planning." The Minister of Town and Country Planning is not mentioned in the Act.

The R.I.B.A. Town and Country Planning Committee asked Lord Balfour of Burleigh to move amendments so as to secure that no orders should be made by the Minister of War Transport without prior consultation with the Minister of Town and Country Planning. His Lordship was good enough to move these amendments in the House of Lords on the Committee stage of the Bill. The Government resisted the amendments, and Lord Walkden said: "What the noble lord proposes should be put into the Bill involves a very important constitutional principle, namely, whether or not you should have single ministerial direction; whether or not you should interfere with ministerial responsibility by compelling consultation with another Ministry, both of them being concerned, when a measure comes before the House or is under consideration. That would lead to confusion and perhaps to unhappy incidents. It would be most inadvisable and would be contrary to the practice which we have reached, and under our system works with the utmost smoothness and in a businesslike way. I assure the noble lord that town and country planning will never be absent from the mind of any Minister of Transport when he proposes to make a new road. It cannot be. He must consider what he may improve and what, if he is not careful, he might dis-improve. I hope the noble lord will not press his amendment." Lord Balfour then asked for an assurance that "not only was the Minister of Town and Country Planning consulted during the preparation of this Bill, but that there will be permanent standard arrangement for inter-departmental consultation at a high official level." Lord Walkden said: "I can assure the noble lord that there will be continuous consultation." The amendments were then withdrawn. (House of Lords, 12 February 1946.)

BOOK NOTES

An Autobiography. Frank Lloyd Wright. iv + 486 pp. + 76 photo. Faber & Faber. 1945. 35s.

When Democracy Builds. Frank Lloyd Wright. x + 131 pp. + 8 pls. University of Chicago Press. 1945.

REVIEWED BY JOHN PINCKHEARD [*A.*].

Frank Lloyd Wright has always been regarded as something of a phenomenon—a lonely and unaccountable star that first blazed into the architectural firmament in the nineties, and which after fifty years is still scintillating. His autobiography—published in part in 1932 in the U.S.A., and now for the first time by an English publisher—is important in so far as it gives an insight into the background and character of the man who, not without justice, has been referred to as the "father of modern architecture."

Wright came of Welsh immigrant stock and from his earliest years disclosed an aptitude for construction and a distaste for academic education. As a young man he worked in the Chicago office of Louis Sullivan, at a time when the architectural atmosphere of that city was probably the healthiest in the world. Sullivan himself was the dominant figure in what has come to be known as the Chicago school, and Wright was his devoted pupil. The work of the Chicago architects, with its frank acceptance of the steel frame and its resolute rejection of eclecticism, had gone farthest in the treatment of the skyscraper as a specific architectural problem, and held the greatest promise for the future. Wright could scarcely have had a better apprenticeship.

It was an historical misfortune that the clean, straightforward work of this group was swamped by the flood of mercantile classic and Woolworth gothic which swept the city in the nineties. The Columbian Fair of 1893, so bitterly criticised by Sullivan, sounded the death-knell of the Chicago school. Of the younger generation, Wright alone kept his architectural integrity and had the strength to turn down Daniel Burnham's offer to send him to the Beaux Arts in Paris—at a time when most young architects would have given their eyes for such a chance.

In his own practice, which he had launched even before leaving Sullivan, he devoted himself to the problem of the house as a shelter; and throughout his life it has remained his main preoccupation. His output was high and by 1910 he had well over a hundred buildings to his credit; a body of work sufficient to ensure him an international reputation. In that year a lavish monograph of his work was published in Germany by Wasmuth. In Holland, Berlage was introducing Wright's work to the younger generation of Dutch architects. The "prairie houses" of this period with their open planning, emphatic horizontal emphasis and characteristic geometrical ornament were soon well known in Europe. Yet in his own country his influence remained negligible.

In 1916 he was chosen by the Japanese to build the Imperial Hotel in Tokio. For over four years he lived and worked in Japan, enchanted by its culture and its people. The native architecture impressed him deeply and its influence can be discerned in some of his later work. After drawings for the great earthquake-proof building were complete, there was no contractor who would risk undertaking the erection of Wright's unorthodox design. Characteristically he organised the building operation himself with local labour. Two years after its completion, when the great earthquake laid all Tokio in ruins, his intuitive engineering was triumphantly vindicated. The Imperial Hotel alone stood undamaged.

His return to the States was followed by a difficult and architecturally unproductive period. Caught up in the ignominious procedure enforced by the American divorce laws and victimised by ugly scandals, he had scant opportunity for creative work. Burdened by debt and hounded by newspaper reporters, some of his best years were laid waste.

Not until the early thirties did he get back into his stride. It was at this time that he founded the Taliesin fellowship—an experiment in architectural education and community life; in which he had ample opportunity to elaborate his own theories of "organic architecture." In recent years honours have been bestowed on Wright from all parts of the world. Even in the U.S.A. his greatness has met tardy recognition.

For anyone who is prepared to cope with Wright's verbose literary style there are passages of considerable architectural interest—notably the accounts of the design and erection of his own buildings. But the rather trivial personal reminiscences and much of the semi-mystical theorising might well have been omitted.

Wright's theories on social organisation and planning are further expounded in his more recent book *When Democracy Builds*. He advocates decentralisation pushed to extreme limits. His Utopian "Broadacre City"—the city which is "everywhere and nowhere"—is characterised by a consistent elongation of the horizontal dimension. The "city" at a density of one person per acre spreads out unchecked, and almost unseen, into the countryside. The social organisation underlying this planning conception appears to derive from the political economy of Henry George.

Wright is at pains again here to elaborate his conception of "organic architecture," but the earnest student would be well advised to go and look at any one of Wright's buildings, and he will achieve a far better understanding of what is meant by "organic architecture" than ever he will from the architect's attempts at verbal explanation.

Indeed, so much that Wright says in print is better said for him by his buildings. As a pioneer in the modern movement in architecture his place in history is assured. But it is doubtful whether any of his writings can add much to his already established reputation.

Houses: Permanence and Prefabrication. By Hugh Anthony. 4to, 64 pp. Illus. Pleiades Books. 1945. 6s.

REVIEWED BY THE HON. H. A. PAKINGTON [*F.*]

The hall-mark of our age is our intense awareness of indurability. Men in past ages have thought that they were reaching finality: we know that we are living in a rapidly-changing world, and we do not pretend to see the goal. This book, lucidly written and intelligently illustrated, gives the sense of an era of impermanence, an era of trial and error, before we can snuggle down to another Augustan Age.

The fringe of the next development is touched by the American trailer house, brought by road in two parts and ready for occupation within a few hours of its arrival. Here indeed is a pointer to a possible next phase—that of the movable house. Are we approaching the time when the hostess will ask her guests to bring a double bedroom and, if possible, a bathroom?

But, whatever developments are in sight, it is certain that we have already reached the age of the detached, or at any rate the semi-detached house—an arrangement which puts a premium on the decent setting of the dwellings. A house, as the author says, is "an exhibition hall of individual taste," but can the same licence be extended to the external features? Or can we, as the author suggests, set minimum standards of amenity, as well as minimum standards of structural and sanitary fitness? We require a design for living outside as well as inside the house if the Age of the Shack is not to develop a new type of slum. A radical reform in taste and a raising of the standard of decency are required. To quote again: "To technicians the layman's interest is of little value unless it is based upon knowledge." Education is the *sine qua non* of successful democracy, and for that reason a wide circulation is desirable for this excellent book and suchlike publications.

Housing Estates. A study of Bristol Corporation policy and practice between the wars. By Rosamond Jevons and John Madge. Sm. 4to. 104 pp., illus. For University of Bristol by J. W. Arrowsmith, Ltd. Bristol. 1946. 7s. 6d.

REVIEWED BY MISS J. M. ALBERY [*A.*], A.M.T.P.I.

Few readers with any experience of housing estates will find strange or unexpected material here, but the ground is fully covered, and a coherent picture of living conditions is very concisely presented. This study will have considerable value because it is applicable not only to the particular estates described, but to nearly all local authority housing built between the wars.

The problems discussed are not all easy to solve, and lead one to a fuller realisation of the danger of dealing with housing in a watertight compartment unrelated to conditions and standards of living as a whole. Poverty has been accentuated by slum clearance whereby large poor families have been transferred to outlying estates where the cost of rent, furnishing, food and transport have all been higher than in their old homes. Large families have not been able to afford parlour-type houses, and overcrowding is a serious factor on these estates. On the other hand the prohibition against lodgers and the lack of two or three room houses has prevented single or childless people from living among the larger families whom they might assist. This also militates against the establishment of social institutions usually initiated by those whose energies are not completely absorbed by the care of small children. Young married couples are forced through lack of suitable accommodation to migrate, which is again prejudicial to the social life of the neighbourhood.

There is now a general awareness of the necessity of providing the physical framework for a full "neighbourhood" life, but this study shows clearly that this is not enough, social conditions have got to be such as to make it possible for people to take advantage of better

physical conditions. Poverty is here the worst problem, and is related to the number of children in families, and to the question of differential rents. Other problems fall into two groups: those concerned with the relation of the new estates to the remainder of the town, and those concerned with the relation of different social groups and different sizes of family to one another and to the accommodation provided. The authors advocate variety in both respects, and suggest that socially this should be achieved by planning small compact groups of similar social status, so that streets would have the same character, but the estate as a whole would contain a full range. An important point made is that where existing estates are not yet complete the over-preponderance of four- and five-room dwellings should be mitigated by building two- and three-room ones only.

Existing estates will obviously present serious problems for some years to come. For example, the original settlement of a big majority of families with small children causes pressure on school space to occur in waves, and as these children grow up there will be similar sudden need for youth institutions on a large scale, which will not afterwards be maintained. Overcrowding will gradually lessen, but then there will not be enough small houses. If similar troubles are to be avoided in future, it is to be hoped that "Housing Estates" will find its way into the hands of housing committees, not only in Bristol, but throughout the country.

To-morrow's House by George Nelson and Henry Wright. 4to. 214 pp. Simon & Schuster. New York. $3.00.

REVIEWED BY PROFESSOR BASIL WARD [*F.*]

On the attractive dust cover of this book there is a sub-title: "A Complete Guide for the Home Builder." There is also the information that the book tells you: 1. How to plan your new home. 2. How to remodel your present home. 3. How to make the best use of the latest materials, equipment and appliances. Furthermore, we are told that Mr. Nelson is Consultant, Architectural Forum, and Mr. Wright, Managing Editor, the Forum.

The book is of the "popular" kind and an outstanding feature of it is the method used by the authors to present profound ideas in a not too profound way. Clearly, it is intended to edify the public. A technique is involved not unlike the better kind of British documentary film, and good pamphleteering is the result, in a field where public edification is much lacking. There are 214 pages, of which 96 comprise 232 photographs of the insides and outsides of small houses in America. There are several line drawings to illustrate points in an amusing way and, to amplify the documentary technique, there is some narrative and there are some imaginary family conversations. The text is in pleasant readable print and arranged in double columns with sub-headings here and there, splitting up the reading matter into portions likely to be digestible.

I wish to stress these facts about the book because the authors seem determined to reach, not so much the architect and the well-informed, but the widest section of the American public, to provide information likely to influence higher standards in domestic design—and they are probably succeeding. (It is interesting to note that *To-morrow's House* has a full page advertisement in *Life*, that popular American magazine with a very large circulation.)

As well as the public, it should interest architects—British and American, particularly those in this country who believe the interests of the public are best served by informing the people at all levels: informing them of *architecture*, of its humanising possibilities in these tragic days, of it as a medium of release in psychological tensions imminent in the preoccupations of our time—of which not the least profound and all embracing is with spatial problems. Such a medium is not to be got in mere engineering and may never be got from science; these have to do with technics but the art in architecture has to do with intuitive things of the spirit.

It is a sane and honest little book with its scope consciously limited. All the possibilities it sketches are technically realisable "in our time," and the book says so. Also, it says, in simple, forthright, terms how, in the present state of affairs the small man can set about getting them realised, with reasonable hope of success. It plumps for the well-trained and qualified architect; it discusses, with point, the ideal relationship between the architect and the home builder; it draws attention to well-established means for raising building finance—finance that would, of course, be available to many in that country of relatively high overall standards of wealth.

The fact that the arguments in the book do not relate directly to Great Britain, where housing is being tackled as a national problem and is controlled and directed from Central Government, should not deter us from picking up the book; particularly those of us in the profession, and others, who are intent upon getting to grips with the very real and pressing necessity to inform the public—a necessity made more than ever important as we extend democracy.

There are, doubtless, a number of criticisms that could be made of this really very successful attempt to inform. For example, though the houses are "small," standards of wealth suggested by the illustrations—park-like sites, ornamental water, lovely (labour-consuming) gardens, the best of building materials, finishings, fittings and furnishings, seem high—impossibly high to us, with our rather mean outlook puritan views, and our traditionally under-privileged majority. But there is less "pie-in-the-sky" in this book—in its message, than is contained in much of the pseudo-scientific writing apparently so beloved of our Western cousins; and there is more of fundamental good and more than a mere promise of reality, than is conveyed by the brightly coloured pictures, in much American literature, of automobiles, refrigerators, labour-saving devices, and other such expressions of "high pressure" salesmanship that are part of the American way of life.

The Law Relating to Town and Country Planning, by W. Ivor Jennings, M.A., LL.D., Barrister-at-law. Second edition by J. R. Howard Roberts, C.B.E., Solicitor and Parliamentary Officer to the London County Council. 8vo. xvi + 660 pp. London. 1946. Charles Knight. Price 45s.

This new edition on the law of Town and Country Planning is almost up to date. The qualification is necessary in these days of rapid legislation.

There is an interesting history of planning legislation and the effect of the Acts of 1932 to 1944 is explained, together with the Licensing Planning Act, 1945.

The planning Acts are set out in full and the import of each section is explained, a feature of great value.

Interim Development is dealt with separately, as also is Procedure in planning administration. The appendices deal with Land Acquisition, Ribbon Development and Rules, Orders and Regulations.

The Law of Dilapidations, by Benaiah W. Adkin, F.S.I., F.A.I., Barrister-at-law. 8vo. xvi + 286 pp. London; Estates Gazette. 1946. 18s. 6d.

This book has been written as a text-book for students, but that it will be of value to the surveyor in practice there can be no doubt. It is an exhaustive treatise on the subject and every phase is dealt with in detail. A guide to statutory provisions is provided so that the subject matter of any particular Act can be found and then read *in extenso* in the relevant chapter. This guide includes emergency legislation enacted for war purposes. Ecclesiastical Dilapidations are the subject of a separate chapter, as is also War Damage.

The many cases cited should be used by the layman with caution. Judgments may depend on the facts of the particular case, and without legal guidance it would be unwise to assume that the law as then laid down is of general application. C. W.

Draughtsmanship. By R. Fraser Reekie. 8vo. 197 pp. illus. Edward Arnold. London. 1946. 10s. 6d.

Any student of architecture about to embark on his training, will find much useful information in this survey of draughtsmanship. Starting with drawing equipment, in which, it will be noticed, the reader is given no encouragement to adopt any but our traditionally insular types of instruments and drawing-board aids, sections are also devoted to line drawing, lettering, scale drawing, standard conventions, tracings, projections, rendering and freehand work.

Plumbing. By R. H. Winder. Building Craft Series. 8vo. 151 pp. Longmans Green. London. 1946. 7s. 6d.

This book is an addition to the Building Craft Series, of which several volumes have already been published. Intended primarily for trainees in the craft, it will be found to contain much information on both internal and external plumbing of interest to the architectural student. The text is admirably clear, and is well illustrated with line drawings by the author, which themselves show the value of the advice on draughtsmanship and lettering given in the final chapter.

CORRECTIONS

In the review of *Kunstlicht und Architektur* by L. C. Kalff in the January 1946 issue of the R.I.B.A. JOURNAL, in view of the fact that the book was published during the German occupation it was referred to as "a Nazi product." It is pointed out that this was not intended to imply any form of collaboration between the author and the Germans. It is understood that the book was written and published in Dutch, the German edition being added as a condition for obtaining a licence from the German authorities in Holland.

In the review by John Archibald [*A.*] of *Round the Shires* by Martin S. Briggs, the publishers were erroneously shown as "Cassell," whereas the publishers are Herbert Jenkins, Ltd. It is understood a second edition of the work is now available.

NOTES FROM THE MINUTES OF COUNCIL MEETINGS

MEETING HELD 7 MAY, 1946

Mr. C. H. James [*F.*], R.A.

The Secretary was instructed to convey the cordial congratulations of the Council to Mr. C. H. James [*F.*] on his election as a Royal Academician.

Honorary Fellowship

The Secretary reported that the Most Reverend Richard Downey, Roman Catholic Archbishop of Liverpool, had accepted nomination as an Honorary Fellow.

Honorary Associateship

The Secretary reported that Sir Stephen Tallents and Miss Margaret S. Taylor had accepted nomination as Honorary Associates. The Council have invited Sir Geoffrey Whiskard, Permanent Secretary to the Ministry of Town and Country Planning, to accept nomination to the Honorary Associateship.

Appointments

B.S.I. Committee B/64: Kitchen equipment: Mr. Felix Goldsmith [*A.*] as deputy for Mr. Brian Peake [*A.*].
B.S.I. Committee CH/16: Dustbins and Storage Containers: Mr. Felix Goldsmith [*A.*] as deputy for Mr. Brian Peake [*A.*].
Council of the Hertfordshire Society: Mr. Hope Bagenal [*F.*].
South-East Essex Technical College and School of Art: Architectural Advisory Committee: Mr. A. Minoprio [*A.*].
Industrial Welfare Society: Advisory Committee on Colour in Industry: Professor W. G. Holford [*A.*], Mr. John Earley [*A.*] (deputy).
National Federation of Community Associations, Annual Conference, 25 May 1946: Mr. A. L. Roberts (Vice-President).
Public Relations Committee: Exhibition Sub-Committee: Mr. Kenneth Bayes [*A.*].

Parliamentary Architecture Committee

The President reported that an informal meeting between the Executive Committee and a number of representative Members of Parliament had shown that members of both the main parties welcomed the proposal to revive the Parliamentary Architecture Committee. Two of the M.P.s who attended the meeting had arranged to convene a meeting at the House to discuss questions of procedure.

Export Group for the Constructional Industries

As a means of maintaining contact between the architectural profession and the Export Group for the Constructional Industries the Council approved the setting up of a committee consisting of:

Mr. H. S. Goodhart-Rendel (Past-President), Mr. A. F. B. Anderson [*F.*], Mr. R. E. Enthoven [*F.*], Mr. E. Maxwell Fry [*F.*].

It was agreed that a short article describing the work and objects of the Export Group, and the part architects might play in it, should be published in the JOURNAL.

Programme for the Session 1946-1947

The Council approved the following arrangements for the Session 1946-1947:—

Council Meetings: To continue the present practice by which the Council meet at 2.30 p.m. and the General Meeting is held at 6 p.m. The time of the latter might, however, be changed to 6.30 if it is found feasible to arrange for buffet refreshments beforehand.

General Meetings: The style "Informal" to be dropped; the Presidential Inaugural Address in November, the usual special meetings for the presentation of prizes and the Royal Gold Medal, and the pre-war procedure for the reception of new members at General Meetings to be resumed. For the time being, however, none of these will be occasions for evening dress.

Council and General Meetings: Both to be held as at present on Tuesdays.

Annual Conference: To be revived in 1947.

Annual Dinner: Revival to be deferred for later consideration in the light of the rationing situation.

Award of London Architecture Medal and Medals in Areas of Allied Societies: A sub-committee consisting of Mr. T. Cecil Howitt [*F.*], Mr. H. J. Rowse [*F.*] and Mr. Ralph Tubbs [*A.*] was set up to report upon the conditions under which these awards should be revived.

Members' Subscriptions and Rebate to Allied Societies

The Council gave final approval to the recommendations of the Finance and House Committee for the raising of members' subscriptions and the reversion to the pre-war basis of calculating the amount of rebate payable to Allied Societies.

Application of British Standards to Housing Schemes

The Council approved a recommendation of the Architectural Science Board General Purposes Committee that the Ministry of Health should be invited to review the British Standards listed in its Circular letter 211/45 dated 27 November 1945. These standards were originally conceived as models by which the trend of production might be influenced, and their adoption was to be a matter of discretion. The Council thus accepted the view that modifications are necessary in certain cases before they are adopted for the purposes of the present drive for standardisation.

Membership

The following members were elected:—

As Fellows: 15. As Associates: 60. As Licentiates: 22.

Election 9 July 1946

Applications for election were approved as follows:—

As Hon. Fellow: 1. As Hon. Associates: 2. As Fellows: 9. As Associates: 20. As Licentiates: 20.

Election October 1946

Three applications for election as Associates from overseas candidates were also approved.

Reinstatements

The following applications for reinstatement were approved:—

As Associates: Bernard Jessop, Harold Wyatt. As Licentiate: Leonard Crowfoot.

Resignations

The following resignations were accepted with regret:—

Herbert George William Brinsley [*F.*], James Augustus Souttar (*Retd. F.*], John David Armishawe Carter [*A.*], James Wright [*A.*], Robert Ewan [*L.*], Henry Hewett Hounsell [*L.*].

Applications for Transfer to the Retired Members' Class under Bye-law 15

The following applications were approved:—

As Retired Fellow: George Morrison Hay.
As Retired Licentiate: John Morlais Evans.

Obituary

The Secretary reported with regret the death of the following members:—

Stanley Davenport Adshead, P.P.T.P.I. [*F.*].
Professor Adshead was a Vice-President in 1921 and 1922. He was a former member of the Council and had also served on the Town Planning Committee, London Building Acts Committee, Thames Bridges Conference, Board of Architectural Education, Royal Gold Medal Committee, and several other committees.
William Broadbent [*F.*].
Godfrey L. Clarke [*F.*].
George Flint Clarkson [*F.*].
Fred Howarth [*F.*].
Glendinning Moxham [*F.*].
Mr. Moxham was a former member of the Council and a former President of the South Wales Institute of Architects.
Lionel Arthur George Prichard [*F.*].
Frank Richardson [*F.*].
James Henry Vaughan [*F.*].
Louis Ambler, F.S.A. (*Retd. F.*].
Mr. Ambler was a former member of the Council and a former Hon. Examiner (Architecture). He served for many years on the Literature Standing Committee as a member of the Committee and as Hon. Secretary, Vice-Chairman and Chairman.
Henry Blinman Mackenzie (*Retd. F.*].
James Hervey Rutherford [*Retd. F.*].
Mr. Rutherford was Pugin Student 1899 and Owen James Student 1901.
Walter Alexander [*A.*].
William Robertson Annan [*A.*]. Killed on active service.
John Douglas Bland [*A.*].
James Muir Calder [*A.*].
Robert Edmund Crossland [*A.*].
Hugh Alexander Dalrymple [*A.*].
Herbert John Lake [*A.*].
Godfrey Horton Ledger [*A.*].
Alan Lomax [*A.*].
Charles Rene Cathrow [*L.*].
Leonard Stanley Jones [*L.*].
James Balderston Whyte [*L.*].
Charles William Maplesden [*Retd. L.*].

Competitions

HOUSING, NETHER LIBERTON, EDINBURGH

Edinburgh Corporation invite architects of British nationality resident in Great Britain to submit designs for the development of a housing estate at The Inch, Nether Liberton, Edinburgh.

Assessor: Mr. George D. Macniven [*F.*].

Premiums: £500. £300 in respect of other designs according to merit.

Last day for submitting designs: 7 September 1946.

Conditions of the competition may be obtained on application to Mr. J. Storrar, Town Clerk, City Chambers, Edinburgh, 1.

Deposit: Two guineas.

COMPETITION FOR PLANNING OF THE HAYLING BEACHLANDS

The Urban District Council of Havant and Waterloo invite the submission of designs from competitors with suitable professional qualifications for the laying out of part of an area known as the Hayling Beachlands with a view to the improvement of its amenities.

Assessor: Dr. H. V. Lanchester, Litt.D., M.T.P.I. [*F.*].

Premiums: £200, £100, £50.

Last day for submitting designs: 30 September 1946.

Conditions of the competition may be obtained on application to Albert E. Madgwick, Esq., Clerk of the Council, Town Hall, Havant.

Deposit, one guinea.

COLOMBO CATHEDRAL COMPETITION

The Colombo New Cathedral Committee, in association with the Standing Committee of the Diocesan Council of the Church of Ceylon, invites architects who are qualified members of the Royal Institute of British Architects or allied bodies to submit in competition designs for the proposed Cathedral of The Holy Cross, together with Bishop's House, Divinity School, Diocesan Hall and Offices, in Colombo, on a site adjoining Buller's Road in that city. The competition is being organised by the Royal Society of Arts, London, on behalf of the Colombo New Cathedral Committee.

Assessor: Sir Giles Gilbert Scott, O.M., R.A. [*F.*].

Premiums: £500; £200; and £100.

Last day for submitting designs: 31 December 1946.

Conditions of the competition may be obtained on application to The Secretary, The Royal Society of Arts, 6 John Adam Street, Adelphi, London, W.C.2. Deposit £1.

COMPETITION FOR DESIGN FOR A PUBLIC DRINKING FOUNTAIN

The Metropolitan Drinking Fountain and Cattle Trough Association offer premiums for a design for a Public Drinking Fountain. The Royal Society of Arts have undertaken to conduct the competition and to appoint assessors.

Assessors: Mr. Oswald P. Milne [*F.*], Mr. Keith Murray, R.D.I. [*F.*], Surgeon Vice-Admiral Sir Reginald Bond, K.C.B., M.B., F.R.C.P., F.R.C.S., D.P.H.

Premiums: £50, £25.

Last day for submitting designs: 31 July 1946.

Conditions of the competition may be obtained on application to the Royal Society of Arts, John Adam Street, Adelphi, W.C.2.

Competition Results

WESTMINSTER: COMPETITION FOR WORKING-CLASS FLATS

1. Arnold J. P. Powell [*A.*] and John Hidalgo Moya [*A.*].
2. Dr. H. V. Lanchester [*F.*], T. A. Lodge [*F.*] and Partners.
3. Peter B. Dunham [*A.*] and F. Macfarlane Widdup [*A.*].
4. Arthur W. Kenyon, C.B.E. [*F.*] and C. Lovett Gill [*F.*].

Highly commended:

Charles Nicholas and J. E. Dixon-Spain [*FF.*].
Sir John Brown, A. E. Henson and Partners [*FF.*].
Alexander B. Wylie [*A.*] and Ralph Cowan [*A.*].
D. Dex Harrison [*A.*], Ernest Seel [*A.*] and Mrs. Penelope Hawkes.

WORKERS TRAVEL ASSOCIATION: COMPETITION FOR HOLIDAY CENTRES

Design for a Coastal Holiday Centre:

1. Miss Jessie M. Evans, A.M.T.P.I. [*A.*] and Frank Moate.
2. G. W. Nightingale [*A.*] and H. G. Pickering [*L.*].

Commended:

Miss Maureen H. Maher and D. O. Forrest.
Philip E. Bell [*A.*] and Noel E. Campbell [*A.*].
Peter Moro in association with Gordon Bowyer and Miss Sheila Mackenzie.
Hilton Wright [*A.*] and Richard Sheppard [*F.*].

Design for an Inland Holiday Centre:

1. W. W. Fisk, A.A.Dip. [*A.*] and S. F. Burley [*L.*].
2. F. Chippindale [*F.*], T. le Briero and H. W. Rosenthal.

Commended:

Miss Maureen H. Maher and D. O. Forrest.
Stanislaw M. Lancucki, Jan K. Sterling and Witold A. Wo[illegible]rausch.

Obituaries

William Broadbent [*F.*]

We regret to record the death of William Broadbent [*F.*], F.S.I., at the age of 70. Mr. Broadbent received his training at [illegible]adford Technical College and was in practice in 1901 to 1914 and 1919 [illegible] 1945. He practised in Leeds and built many schools, factories and [illegible]ousing estates. He was a member of the Council of the West Y[illegible]kshire Society of Architects and was filling the office of Honorary Tre[illegible]urer at the time of his death. His practice is being carried on by [illegible]Richard Thompson [*A.*] and his daughter, Mrs. Marion Joan Wilson [illegible].

G. Flint Clarkson [*F.*]

We regret to record the death of George Flint Clarkson [*F.*] at the age of 57. Mr. Flint Clarkson, who practised in London, acted as Staff Architect for Messrs. Heal & Son from 1936 to 1939 and also constructed industrial buildings for Messrs. Spillers, Messrs. Talbot Sunbeam, Messrs. Staples & Co. and Messrs. W. E. E. Moore. His work included cafés for the Kardomah Co. and a girls' camp near Cardiff. From 1939 to 1945 he worked for the Ministry of Health.

Captain R. B. Binyon [*A.*], R.E.

We regret to record the death of Captain Roger Basil Binyon, M.A. (Cantab.) [*A.*], which occurred on 25 September 1944 while on active service and of which we have only recently received notice. Born in 1914, Captain Binyon received his architectural education at the Cambridge School of Architecture (Magdalene College) and at the Bartlett School of Architecture, London University. In 1938 he became assistant to Wilton Todd [*A.*], and when called up joined the Royal Engineers.

W. Murray Jones [*A.*]

We regret to record the death of William Murray Jones [*A.*], M.I.A. (S.A.), F.I.L.A., F.R.S.I. William Murray Jones was trained as an architect with Mr. J. Oldrid Scott and, specialising in structural engineering, first worked on the design of docks, slipways, pier and harbour-wall construction, and the layout of parks and gardens for the Brazilian Government. In 1912 he worked in Spain on the Talaru Dam, then the second longest in the world. After working in the Far East on road, bridge and pipe-line construction, he returned to Spain and was appointed Chief of Construction on the electric railway from Barcelona to the French frontier. He also built many engineering workshops, tube mills, etc., for the Spanish Government. After 1921 he worked for the American Radiator Company in England and France and then again returned to Spain, where he built more railway works and a sea wall for the Rio Tinto copper mines, and prepared a scheme for the layout of Algerceiras. He then decided to settle down in South Africa and was appointed City Architect of Durban, where he remained until his death.

Alan Lomax, M.C. [*A.*]

We regret to record the death at the age of 51 of Alan Lomax, M.C. [*A.*]. Articled to a firm of architects in Bolton, he studied at London University and was elected Associate in 1927. He practised at Fleetwood, Lancs., from 1927 to 1930 and with the Warwickshire County Council from 1930 to 1935, and the Hertfordshire County Council from 1935 to 1946. His principal architectural works include the British Legion Club at Fleetwood and several private houses, and he worked on schools under the county architects of Warwickshire and Hertfordshire.

William George Townsend Gray [*L.*]

We regret to record the death of William George Townsend Gray [*L.*] at the age of 60. He received his early training in the Architects' Department of the Co-operative Wholesale Society at Manchester, where he remained all his life except during the 1914-1918 war, when he was a Lieutenant in Trench Mortars. After being Assistant at the Manchester and Cardiff branches of the C.W.S. Architects' Department, in 1921 he was appointed Chief Architect of the Newcastle branch. His principal buildings were drapery warehouses for the Newcastle-on-Tyne branch, the central premises for the Stockton C.W.S. and for the Chester-le-Street C.W.S.

Correction

Mr. Herbert Wigglesworth has pointed out a mistake in the Biographical Note on Sir Herbert Baker in which it was stated "He practised in South Africa from 1882." This should have been 1892. Mr. Wigglesworth says that Baker won the Ashpital Prize in 1889 when he was in the office of Ernest George & Peto.

Correspondence

Crystal Palace Competition

To the Editor, JOURNAL R.I.B.A.

DEAR SIR,—Your readers may care to be reminded that the R.I.B.A. endeavoured to delay this competition until a sufficient number of architects had returned from National Service to ensure a representative field of entries. This caused a letter to be written to *The Times* accusing the R.I.B.A. of obstruction.

The promoters seem to have compromised by making an unreal distinction between layout and buildings, and by holding a paper competition for a scheme that was not assured of implementation. Confronted by their assessors' indecisive award, they must now be regretting their impatience.

Since the lay Press has given prominence to the elevations, in spite of the disparaging remarks of the assessors about them and the award being given for the "layout" only—in some cases even it is assumed that the premiated design will be built for the 1951 Exhibition—and to counter the bad name that this is giving to British architecture at home and abroad, a clear and authoritative pronouncement is required of intention to hold another competition, treating the project as a single whole.

It is hoped that this case will be the occasion for a reorientation of the competition system as a whole. Hitherto it has been assumed that architectural competitions are desirable in themselves; but is this really so? Surely they are a conspicuous waste of skilled man-hours that can ill be spared, unless they contribute to architectural development.

Competitions that merely find new men to operate in the same stale conventions may be of interest to individual architectural careers, but they are no use to architecture. Would-be promoters who want that sort of competition had better be put off. We can only afford competitions whose avowed intention is the advancement of architecture.

M. HARTLAND THOMAS,
Hon. Secretary Mars Group.

Editor's Note.—We referred the letter of Mr. Hartland Thomas to Mr. Kenneth M. B. Cross, chairman of the Competitions Committee, and he sent us the following letter, copies of which he had also sent to the other architectural journals in which Mr. Hartland Thomas's letter was published :—

In reference to the letter from Mr. Hartland Thomas, I have the following observations to make :—

Since there appears to be some misapprehension on the point it should be emphasised that the Competitions Committee of the R.I.B.A. does not nominate assessors in any competition nor does the Committee take any part in such nomination. Assessors are nominated by the President of the R.I.B.A. at the request of the Promoters or they are nominated by the Promoters. The efforts of the Competitions Committee are directed in the main to ensuring that the R.I.B.A. Regulations governing Competitions are carried out.

In the case of the Crystal Palace Competition the assessors were nominated by the Promoters and Mr. Hartland Thomas describes the award as being "indecisive." The award may have been good, bad or indifferent; opinions appear to differ considerably on the point, but it was clear, definite and unequivocal and, for purposes of the competition, quite decisive. Nothing which the assessors may have unwisely said about the winning design or about any other designs can alter the award.

Mr. Hartland Thomas hopes that this case will be the occasion for the re-orientation of the competition system as a whole, and I am sure that any suggestions which he cares to make about such re-orientation will receive the careful consideration of the Competitions Committee.

It is not my experience that most competitions during the past twenty-five years "merely find new men to operate in the same stale conventions." During this period the changes in planning and design as evinced in competition work have been revolutionary and the paramount object of the Competitions Committee during the period during which I have been privileged to serve on this committee has unquestionably been the advancement of architecture.

Yours faithfully,
KENNETH M. B. CROSS [*F.*],
Chairman of the R.I.B.A. Competitions Committee.

Demobilisation of Students

To the Editor, JOURNAL R.I.B.A.

SIR,—In the April issue of the JOURNAL you almost proudly state that demobilisation committee proposes to press for the early release of full-time students of architecture. The "powers-that-be" have again apparently forgotten the hard-working external student. These students of architecture when they have made the very difficult road to success, are acknowledged to be amongst the most practical members of the profession, generally because they commence their studies under very poor conditions in some small office, where every penny counts, and these fanciful architectural school schemes, for the most part constructionally impossible, are unheard of.

Why school students should have preference over external students is something quite beyond me. I should rather have no early releases of students at all, than the release only of school students. Release those students, who can, after all, make some small contribution to the re-building schemes we have all heard so much about. Perhaps, of course, these students are included in the line which runs : . . . "the position might shortly be that there would be very few remaining in the Forces for whom any special consideration would be justified."

Yours sincerely,
SAMUEL H. PORTER, L/Cpl.

Editor's Note.

Students who are not full-time students rank as assistants and are, therefore, entitled to be considered under the "bloc" release scheme in Class "B." They are actually in a more favourable position than full-time students. The Government agreed to release 3,500 architects and architectural assistants under Class "B" in the period ending June 1946, and these are "bloc" releases on the basis of age and length of service. Those who were working in an office before they were called up for military service would, according to their age and service group, possibly be eligible for release under Class "B."

Earthy Tastes in Drinking Water

To the Editor, JOURNAL R.I.B.A.

SIR,—The Director of Water Examination of the Metropolitan Water Board has called my attention to a matter which is of special importance to architects concerned with the design of multi-storeyed flats.

Even before the war a number of complaints had reached the board of unpleasant tastes in drinking water. The matter was enquired into and a report appeared in 1938, of which the substance is roughly as follows :—

The spores of various fungi are frequently present in water supplies. These remain inert at the normal temperature of water taken direct from the mains, but where rising mains are taken up in ducts in close proximity to hot water pipes, temperatures appropriate to the development of the spores are produced during periods (as at night) when little or no drawing-off takes place.

The fungi thus encouraged are of three types and in maturity each gives off a special flavour. These have been distinguished either as musty, earthy or mouldy. Singly or in combination they are equally undesirable and if the drinking water services in, say, the super-imposed kitchens in a high block of flats become affected complaints will certainly occur.

The remedy is to ensure that rising mains tapped for drinking water outlets should be kept cool either by running them in positions completely separate from hot water pipes, or by adequate insulation. A full report of the investigation of this subject by Lieut.-Colonel E. F. W. Mackenzie, O.B.E., M.C., M.B., Director of Water Examination, is to be found in the thirty-third annual report of the Metropolitan Water Board.

Yours faithfully,
J. MURRAY EASTON [*V-P.*].

Edward William Godwin, 1833-1886

To the Editor, JOURNAL R.I.B.A.

SIR,—I am endeavouring to collect material towards a biography of Edward William Godwin, 1833-1886, and should be pleased to hear from anyone who has any of his drawings, letters, or who has information about him other than that in printed form.

Yours faithfully,
G. DUDLEY HARBRON [*F.*].

Colonial Service Architects

To the Editor, JOURNAL R.I.B.A.

DEAR SIR,—The note under this heading on page 217 of the April issue of the JOURNAL, while not incorrect is also not complete ; it seems to me to give rather too rosy a picture of the security and opportunity offered by architectural appointments in the Colonial Service.

It must first be understood that transfer and promotion is unlikely to be offered until the individual has been confirmed in a " permanent " appointment on an established staff. This is a matter of three to five years' service depending on the Colony.

The outlook of Colonial Governments upon their Public Works Services is very different from their outlook upon Administrative, Medical, Agricultural, etc., services. These latter are regarded as permanent and (in young countries like most colonies) indefinitely expanding parts of the Government machine, whereas, while roads, etc., and minor building works require but a relatively small Public Works staff to maintain and slowly extend them, large developments cannot be paid for from the comparatively slender revenues of these countries, and are usually done in spasms with borrowed money, grants or loans. For executing these special works extra staff can be engaged *ad hoc* and dismissed when the need is over.

The post-war days see, in most Colonies, one of these spasms of larger-scale activity and, though I do not wish it to appear that I am trying to put young men off from engaging in what can hardly fail to be a valuable experience, I feel that it is the duty of a member who has seen these things happening to make clearer some matters that have not been dealt with in your announcements, so that prospective applicants may be aware that not all these appointments lead to permanent and pensionable posts.

Yours faithfully,
G. NORBURN [*F.*],
Nairobi,
Kenya.

Basil M. Sullivan

To the Editor, JOURNAL R.I.B.A.

DEAR SIR,—My family deeply appreciate Dr. Lanchester's notice of my late brother and ask me to thank him for it through you. Basil had an admiration for Dr. Lanchester enduring through the many years of their friendship. It may be truly said that his old master had some part in the formation of my brother's lovable character.

Basil, however, was a seventh son—not second—and perhaps some of the gifts proverbially bestowed on such had descended upon him. The second son was Edmund, whose pen drawing was so well known.

It is typical of Dr. Lanchester that he should have undertaken this duty and have done it so nicely.

Yours sincerely,
L. SYLVESTER SULLIVAN.

Restoration of Historic Buildings

To the Editor, JOURNAL R.I.B.A.

SIR,—May I risk controversy by giving a different point of view from Mr. Arthur J. Davis on the subject of " Restoration of Historic Buildings."

Whether or not, in fact, the Architectural Schools tend to specialise in " certain branches of architecture " seems unimportant, for the ultimate considerations governing the use, in practice, of any specialised architectural knowledge should be æsthetic—arising from those " artistic and scholarly qualities " which Mr. Davis demands. But these qualities, if being inherent they can be learnt, are not necessarily learnt deductively from traditional architecture ; they can also be learnt through inductive teaching ; and if the former is to result in the students' primary approach to architecture being " whether he decides for Tradition or Modernism or both," then traditional architecture is better not taught.

Even correctly studied, traditional architecture can do no more than establish certain largely abstract æsthetic fundamentals. One fundamental arises from dual study, except in the last 60 years or so, architecture has always been contemporary. Except in isolated examples, restorations or alterations to existing buildings were carried out in contemporary architecture, not in the style of the existing—except in the use of the same materials ; witness the English cathedral, Hampton Court, and many other major and minor examples which owe their perennial freshness to just this fact.

Yet one gathers that Mr. Davis would have us break with tradition, and restore in the style or character of the existing (though how we would so restore a mediæval building exhibiting the different characteristics of their centuries it is difficult to know). Surely, the æsthetic thought behind any contemporary architecture arises from the spirit of the times ; no architect, imbued with that spirit but designing in the spirit of another age, could fail but to produce a dead thing ; as would an architect not imbued with any spirit.

Imitation may be the sincerest form of flattery, but it is imprudent to flatter such as Wren surely ; if we restore one of his buildings with contemporary work, we enhance what is left of a great man's work ; if we seek to copy it, we smother it.

I think most of the young architects would take the view that not a single bomb-damaged traditional building should be restored or adapted to to-day with anything but truly contemporary architecture. Only thus could we make these buildings lasting reminders of that short revival of England's spiritual greatness between 1940 and 1945. If we restore these in their respective styles that reminder will become dimmed with the years until finally it will be discernible only by the deadness that such restoration would ensure.

DUNCAN WYLSON [*A.*].

Vacation Work for Students

To the Editor, JOURNAL R.I.B.A.

SIR,—I attended the informal meeting of the R.I.B.A. on Office Organisation. It was apparent that some practising architects realise that they have a responsibility to architectural students and indicated an appreciation of the work done by students in their offices during the vacation.

I would be glad if you could tell me if there is any organisation to facilitate :

(1) Architects selecting students.
(2) Students selecting suitable architects.

If no such organisation exists, I would suggest that in this field the Architectural Students' Association could most suitably implement the work. I would suggest that :

(1) The Architectural Students' Association should compile a register of students requiring work during the vacation.
(2) That a similar list be kept by the R.I.B.A. of architects wanting temporary assistants.
(3) That contact be maintained between the two organisations and the scheme be advertised in their respective journals.
(4) That to speed up the working of the scheme the administration should be by geographical regional centres such as at present exist in the Architectural Students' Association and which would arrange information and introductions.

I feel that such a scheme would do much to link the student with the practising side of architecture, to their mutual benefit and also the building of a greater sense of unity which I feel is needed in the profession.

Yours sincerely,
C. R. ADAMS.

Editor's Note.

Before the war the R.I.B.A., in conjunction with the Allied Societies, assisted full-time students to find suitable offices in which to gain practical experience during vacations. As the requirement of practical experience was waived during the war owing to the fact that so little architectural work was being carried out, the scheme fell into abeyance. The Board of Architectural Education are now considering the question of practical experience in all its aspects.

Colour in Buildings

To the Editor, JOURNAL.I.B.A.R

SIR,—In his talk on colour at the R.I.B.A., Mr. Allen illustrated that the planned use of colour in industrial architecture is a recognised means of increasing the efficiency, safety and welfare of factory operatives. There is also, surely, urgent need for a more imaginative use of colour and texture in schools, public buildings and domestic architecture.

Mr. Allen pleaded for a more informed use of colour in architecture and posed the question, " Who is to plan the colour, the architect, or a colour consultant ? " I think there is a strong case for the employment of a colour consultant. The study of colour is a science, the application of which, to architecture, is an art—in fact, colour is a specialist's job. The architect is increasingly a co-ordinator of specialists, apart from being himself very often handicapped with regard to colour by lack of aptitude and training and not infrequently by partial colour-blindness.

But an unqualified colour consultant could do more harm than good.

I consider the following qualifications necessary :—

(1) An acute and trained colour sensibility.
(2) Ability to plan with colour.
(3) Appreciation of architectural form and æsthetics and ability to work with the architect at the drawing board stage.

And a knowledge of :—

(4) Illumination and its effect upon colour, texture and form.
(5) The properties of contemporary building materials.
(6) The practical application and properties of paint and pigmentation.
(7) Physiological and psychological effects of colour.
(8) The historical use of colour.

Perhaps this is rather an idealistic list and would suggest the need for a group of Mr. John Pipers. But the colour consultant is used in America on a commercial basis and successfully. Is it too much to hope that in Britain the colour consultant may play a useful part in the architect's team of experts?

Yours faithfully,
ENID VERITY, N.R.D.

Military Architects

To the Editor, JOURNAL R.I.B.A.

SIR,—While in substance I agree with Mr. Collins' letter on the queer combination of military officers and qualified architect and have no use for the retention of military titles, it is certainly up to each of us to regain our pre-war clients who, by the business acumen of those who remained in this country, have spirited themselves away and are to-day performing jobs of work which rightly belong to demobbed architects. Therefore, if by the use of a title, some clients' already dimmed memory of World War No. 2 might revive, at least work might pass to someone in need and not into an office already overburdened by work and with a shortage of staff.

I am sure that each returning member from the Forces will use methods he thinks best, and always in keeping with the Code of Professional Conduct, to re-establish himself either privately or in a salaried position.

Yours faithfully,
DAYDON GRIFFITHS [*F.*].

London Schools of Architecture

To the Editor, JOURNAL R.I.B.A.

SIR,—The May issue of the JOURNAL contains the statement that the Regent Street Polytechnic School of Architecture was the only London School of Architecture which was not evacuated and which remained open throughout the war years. This statement is, of course, quite inaccurate, for except for a period of four days, during which the Royal Engineers removed a 1,000 lb. unexploded bomb from the centre of the Northern Polytechnic buildings, this School also remained open throughout the period of the war.

I do not desire to make publicity value out of the fact that the students of this School shared with millions of other Londoners the experiences of the London "blitz," but it appears desirable to draw attention to a carelessly inaccurate statement which some might consider a reflection on the Northern Polytechnic.

Yours truly,
THOS. E. SCOTT [*F.*],
Head of the Department of Architecture,
The Northern Polytechnic.

Joseph Louis Hampson [F.]

To the Editor, JOURNAL R.I.B.A.

SIR,—It was with profound sorrow that I saw the death recorded in a recent copy of the R.I.B.A. JOURNAL of an old and valued friend. A native of Bolton, Lancashire, he was an articled pupil to the firm of Bradshaw, Gass & Hope [*F*/*F.*] and later the Chief Architectural Assistant to the firm of Briggs & Thornely [*F*/*F.*], of Liverpool and Blackburn. It was with this firm that I first met Joseph Louis Hampson. His fine appreciation of architecture, music and all kindred arts made a very deep impression on my mind. He was at all times a source of encouragement and inspiration to all students of architecture who came in contact with him and many will mourn the passing of a very fine gentleman.

PETER D. LAWSON [*A.*].

NOTES AND NOTICES

The Annual Reception

The first post-war Annual Reception of the Royal Institute is to be held on Friday, 28 June, from 8 p.m. to 11 p.m. Members and guests will be received by the President and Lady Thomas in the Henry Florence Hall. Members desiring tickets should submit their applications, together with cheques, as soon as possible. Morning dress. Tickets, 7s. 6d. each. The restriction on members bringing not more than one guest has been removed.

Essex Education Committee

SOUTH-EAST ESSEX TECHNICAL COLLEGE AND SCHOOL OF ART

Applications are invited for the permanent post of full-time Lecturer in Architecture.

Candidates should possess some practical experience and a recognised qualification in architecture. Preference will be given to those with a degree or diploma in architecture and an additional qualification in Town Planning or surveying.

In accordance with the qualifications of the successful candidate the post may be either (*a*) a post of special responsibility, basic salary £300 + £15—£525, according to teaching and professional experience, plus responsibility allowance £50—£100 or (*b*) subject to the approval of the Ministry of Education, a Senior Assistantship, salary £600 + £25—£750. London allowance up to £48 per annum will be paid in either case and allowance for full-time study or training where applicable.

Forms of application (stamped addressed envelope) may be obtained from the Clerk to the Governors, South-East Essex Technical College, Longbridge Road, Dagenham, to whom they should be returned as soon as possible.

Government of India

The High Commissioner for India invites applications for the post of Senior Architect (Educational Buildings) in the Central Public Works Department, Government of India.

Candidates must be Fellows or Associates of the R.I.B.A. with at least ten years' experience in an architect's office after qualifying. Special experience in designing Technical Colleges, Institutes and other educational buildings essential. Age between 35 and 45. Appointment on contract for three years. Salary at flat rate of Rs. 1,400 per month (£1,260 per annum) plus dearness allowance, and for candidate of non-Asiatic domicile, £30 per month Overseas Pay. Leave. Free passages to and from India and if married for family.

Further particulars and forms of application may be obtained on request (by postcard) from the Office of the High Commissioner for India, General Department, India House, Aldwych, London, W.C.2.

Last date for receipt of applications, 6 July 1946.

Borough of Leominster

The Leominster Borough Council desire to appoint an Architect to prepare plans, specifications, etc., in connection with their Housing Programme. Persons or firms willing and able to carry out this work are invited to submit their names and addresses to the Town Clerk, Grange Court, Leominster, not later than the end of June 1946.

Northern Polytechnic, Holloway, N.7

The Governing Body invite immediate application for appointment to the full-time staff of the School of Architecture as (*a*) Studio Master in Design and (*b*) Lecturer on Building Construction, Working Drawings and Materials. Applicants should be Fellows or Associates of the R.I.B.A. and should preferably have been trained in a recognised school. Some teaching experience will be an advantage, but is not essential. Duties will commence on 1 September 1946. Burnham (Technical) Scale Salary. Members of the staff of the School are afforded reasonable opportunities for practice and research. Forms of application, together with full particulars, will be forwarded on receipt of a stamped, addressed foolscap envelope. R. H. Currell, Clerk.

R.I.B.A. Distinction in Town Planning

The R.I.B.A. Distinction in Town Planning is obtainable by Fellows, Associates (who are not less than 26 years of age) and Licenciates. The test by means of which this Distinction is awarded is conducted by special Examiners appointed by the Council of the R.I.B.A.

This award does not take the place of the R.I.B.A. Diploma in Town Planning, which is obtainable by Fellows, Associates and Licentiates of the R.I.B.A. without any minimum age limit.

The primary purpose of the Distinction is to satisfy a demand from senior architects to take a qualifying test in town planning suited to their age and existing attainments.

The Examiners will meet three times a year—in February, May and October. Applications should be submitted to the Secretary of the R.I.B.A. by 1 January, 1 April and 1 September annually.

Copies of the form of application containing the procedure, regulations, general scope of study and bibliography may be obtained free on application to the Secretary, R.I.B.A.

The Use of Titles by Members of the Royal Institute

In view of the passing of the Architects Registration Act 1938, members whose names are on the Statutory Register are advised to make use simply of the title "Chartered Architect" after the R.I.B.A. affix. The description "Registered Architect" is no longer necessary.

Associates and the Fellowship

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next available election they should send the necessary nomination forms to the Secretary R.I.B.A. as soon as possible.

The R.I.B.A. Banister Fletcher Essay Silver Medal

Competitors are reminded that normally this competition is confined to Probationers and elected Students of the R.I.B.A. who have not passed or received exemption from the R.I.B.A. Final Examination. Probationers and Students cannot enter for the competition if they have passed the R.I.B.A. Intermediate Examination more than twelve months before the published last day for the receipt of the essay.

To meet the special conditions which have arisen as a result of the war, *it has been decided that for 1946 the competition will be open to Probationers and Students of the R.I.B.A. under the age of 25 years, who have not passed the Final Examination.*

Informal General Meeting

TUESDAY, 25 JUNE 1946

An informal general meeting will be held on Tuesday, 25 June 1946, at 6 p.m., when the results of the Council election will be announced, and Mr. Gerald Barry [*Hon. A.*] will read a paper on "The Place of the Architect in the Post-war World."

Disciplinary Action

The membership of Mr. Arthur Jackson Wood (Fellow), of 63, Westfield Road, Leicester, has, by decree of the Council made pursuant o the bye-laws, been suspended for a period of two years from 7 May 1946, and accordingly he ceases during that period to be a member of the Royal Institute.

The membership of Mrs. Mildred White White (Associate) has, by decree of the Council made pursuant to the bye-laws, been suspended for a period of two years from 7 May 1946, and accordingly she ceases during that period to be a member of the Royal Institute.

St. Paul's Cathedral Restoration Fund

APPEAL BY THE DEAN AND CHAPTER

The Dean and Chapter consider that the time has come when they should appeal to their friends throughout the Empire for assistance in raising the funds necessary for the reparations and improvements which these tragic years of war have made imperative. A rough estimate has already been published showing that, over and above the large sum to be provided by the War Damage Commission for the main structural repairs, a minimum sum of £100,000 will also be required for various special purposes.

An opportunity has been taken to approach a selected number of leading societies and institutions within the City of London itself—such as the Corporation, the chief banks, and the chief livery companies and insurance companies. In a confidential memorandum submitted to them were given the principal matters which demand urgent attention, including the windows, the heating and lighting of the building, the organ, the renewal of the choir and its ornaments, the reconstruction of the north transept, the repair or rebuilding of the residential houses belonging to the Dean and Chapter, and the greatly increased cost of maintaining the Choir School. To this limited inquiry there has been, without any publicity, a remarkable response, and a considerable proportion of the sum required has already been paid and promised. It is proposed to publish a list of these donations in a few weeks.

Meanwhile, it is thought that the generosity of the City of London will be an example and an inspiration to the vast numbers outside that area, whether in this country or beyond it, who have learnt to know and love Wren's great masterpiece, and to whom this appeal is now made. Donations of any amount, which may be spread over a period of years or earmarked for special objects, should be sent to Canon Alexander, the Treasurer of St. Paul's, at St. Paul's Cathedral, London, E.C.4.

Correspondence with the Institute

In order to facilitate speedier attention to correspondence, and to relieve the staff of a great deal of research, it is particularly requested that Members and Students will kindly state in all correspondence with the Institute the class of membership (F., A., L. or Student) to which they belong.

Workmen's Compensation

The Practice Committee wish to draw the attention of members to the fact that the position of architects in regard to Workmen's Compensation and Employers' Liability is the same as that of any other class of employer. That is to say, the employer is under liability to pay compensation in regard to any workman employed by him whose remuneration does not exceed £420 per annum.

The term "workman" includes any person who works under a contract of service (express or implied) or apprenticeship with an employer, whether by way of manual labour, clerical work or otherwise. In the case of manual workers the limit of £420 does not apply. It is obviously of vital importance for every architect with a staff to make quite sure that he is fully covered by insurance, and all members who have not already done so are recommended to consult either their insurance company or their brokers, with a view to securing appropriate cover.

Social Service

The annual report of the Council of Social Service, just published, begins by tracing briefly the history of the Council since its foundation in 1919. It emphasises that "the dominant idea underlying its work has been the promotion of an effective partnership between the machinery of Government and the voluntary activities of the community."

Outstanding developments are recorded in the development of voluntary social service in the countryside. Before the war, over 600 village halls were built with assistance from funds provided by the Carnegie United Kingdom Trust, and the Treasury, through the Development Commission. Since the end of the war there has been a great revival of interest in village halls; the Carnegie Trust has set aside £100,000 over the next five years to continue their assistance, and the Development Commission has re-commenced its aid.

MEMBERS FROM JAPANESE P.O.W. CAMPS

Information has been received that the following members have been released from Japanese hands and are safe and well:—

DAY: COLIN S. [*A.*]
FELTHAM: S. C. [*A.*]
INGLEFIELD: G. S. [*A.*]

MEMBERS SERVING WITH THE FORCES

KILLED

ANNAN: W. R. [*A.*], Capt. R.E.
ATHRON: T. SYDNEY [*L.*], Lieut.-Col. R.E.
BINYON: R. B. [*A.*], Capt. R.E. (Airborne).

DECORATIONS AND DISTINCTIONS

AWARDED MILITARY CROSS

GRAHAM: A. M. [*A.*], Major R.A.

MENTIONED IN DESPATCHES

ANNAN: W. R. [*A.*], Capt. R.E.
ARTHUR: P. R. [*A.*], Lieut. R.E.
ASHWELL: B. J. [*A.*], Lieut.-Col. R.E. (and Awarded American Legion of Merit).
BELTON: T. A. L., M.B.E. [*A.*], Major R.E. (Twice "Mentioned").
BROWN: K. C. [*A.*], Major R.E.
BROWN: W. F. [*L.*], Major R.E.
BRUCE: G. R. [*A.*], Capt. R.E.
BRUNTON: J. H. [*S.*], Capt. R.A.
CLARKE: PETER A. [*S.*], Cpl. R.E.
CLINK: STUART [*S.*], Major R.E.
CRAIG: C. N. [*S.*], Capt. R.E.
ELDER: A. J. [*A.*], Capt. R.E. (Twice "Mentioned").
HOLT: ALEX. [*S.*], Capt. R.E.
JOBSON: W. J. [*A.*], Major R.E. (Twice "Mentioned").
LAWRIE: K. [*L.*], Capt. R.E. (Twice "Mentioned").
LINDSAY: A. T. [*A.*], Major R.E.
MATTHEWS: A. E. T. [*A.*], Capt. R.E.
NORTON: C. A. R. [*A.*], Capt. R.E.
PRINCE: D. H. S. [*A.*], Major R.E.
RYLAND: G. H., M.B.E. [*F.*], Lieut.-Col. R.E.
SARGENT: M. [*S.*], Capt. R.E.
SUMMERS: NORMAN [*A.*], Major R.E.
TAYLOR: DOUGLAS S. [*A.*], Major R.E.
WARD: A. F. [*S.*], Q.M.S. R.E.

Review of Periodicals, 1945-46—III

HOUSING

BUILDER, *1945 November 30, pp. 430-5 :*
London County Council housing. Type plans for post-war schemes for aged persons, houses, various flat types and maisonettes. Plans.

ARP & HOUSING, *1946 February, pp. 48-52 ;*

BYGGNYTT (Oslo), *1944 No. 4, pp. 136-43 :*
"Fridhemstaden" housing scheme, Malmö, Sweden. Detailed description and illusn. of terrace housing with houses alternately facing opposite ways. House plans varied according to family size.

BYGGMÄSTAREN, . . .

WERK (Zürich), *1946 January, pp. 1-14 :*
Three new housing schemes in Zürich, described by A. Roth. Zollikerberg by Auschlimann and Baumgarten, Oerlikon, by A. and H. Oeschger, and Siedlung Sonnengarten Triemli, by Egender. All interesting structurally and æsthetically.

STRUCTURAL ENGINEER, *1945 November, pp. 501-8 :*
Some structural problems in alternative methods of small house construction : paper to Instn. Struct. Engrs., by R. Fitzmaurice, Chief Sci. Adviser, M.O.W.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1945 December, pp. 290-304 :*
Permanent prefabricated houses. Summary of tech. inf. on approved designs, inc. B.I.S.F., Braithwaite, Hill, Howard, Pressed Steel, Easiform, Airey, Orlit. Swedish prefabs. described in detail.

BUILDER, *1945 December 14, pp. 478-80 :*
"Airey" permanent prefabd. house—pre-cast concrete posts, faced pre-cast concrete slabs in "weather-board" form.

BUILDER, *1945 December 7, pp. 456-8 :*
B.C.C.F. (British Cast Concrete Fedn.) Bungalow. Illusd. and described.

BUILDER, *1945 December 28, p. 522 :*
"Keeland" system of house constn. in "Cheecol" lightweight concrete.

FLATS

ARCHITECTS' JOURNAL, *1946 January 10, pp. 29 :*
Flats of Reimersholme, Stockholm, for H.S.B., by Egler and Forbat. Nine 7-storied blocks on island in Stockholm archipelago. Sizes : 1 room plus kitn. and bath to 3 rooms plus ktn. and bath-rm.

BUILDER, *1945 December 28, pp. 520-1 :*
Prefabrication system for flats, designed by Donovan Lee, M.Inst.C.E. ; pre-cast R.C. frame with steel connections, external R.C. panels.

HOTELS

ARCHITECTURAL FORUM, *1945 November, pp. 142-3 :*
Desert hotel. Project by A. Wilson and T. M. Abell.

FARM BUILDINGS

ARCHITECT & BUILDING NEWS, *1945 November 30, pp. 133, 140-1 :*
"Farmer and Stockbreeder" Farm buildings competition. Prize-winning designs for farm of 100 acres capable of extension to 250.

COUNTRY LIFE, *1946 January 4, pp. 26-9 :*
Modern farm architecture by Chr. Hussey. Description of large dairy farm, West Tisted Manor, Hants. Illusd.

SMALL HOUSES

BUILDING, *1945 December, pp. 332-7 :*
The small house of the future : site plg. and residential and neighbourhood units. Article by A. Whittick, with designs by J. Schreiner.

DOMESTIC DEPENDENCIES (in buildings generally)

BYGGMÄSTAREN (Stockholm), *1945 No. 17, pp. 325-45 :*
Two kitchen exhibitions. Kitchen, kitchen-dining, scullery, larder, etc. : planning and equipment. Detailed functional analysis, by S. Lindegren. Cupboard sizes.

AIR TRANSPORT, *1946 January, pp. 20-1 :*
Design of aircraft kitchens. Article by W. Duschinsky. Illusd.

DETAILS, CRAFTS, FITTINGS

ILLUSTRATED CARPENTER & BUILDER, *1945 November 30, pp. 1336 :*
Flint work. Notes on Queries and Answers section on flint faced wall const.

CENTRAL COUNCIL FOR THE CARE OF CHURCHES 9TH REPORT, *1941-5, pp. 44-9 :*
Wall surfaces in churches : ancient usage and modern care. Article by F. C. Eeles, illusd.

BUILDER, *1945 December 28, p. 516 :*
Window boxes on town houses. Note on horticultural factors.

COUNTRY LIFE, *1946 January 4, pp. 20-2 :*
Romanesque wall-paintings in France. Article by A. H. Brodrick.

CENTRAL COUNCIL FOR THE CARE OF CHURCHES 9TH REPORT, *1941-5, pp. 40-1 :*
The restoration of ancient plaster ceilings in churches. Tech. note, by C. J. Robb.

WERK (Zürich), *1945 December, pp. 370-2 :*
Organ screens. Article by R. Ziegler, with illusns of modern examples in Swiss churches.

ARCHITECTURE (general)

BOUW ('s-Gravenhage, Holland), *1945 October :*
This is the first number of a new Dutch periodical published from Koninginnegracht 62, 's-Gravenhage. The issue is introduced by the Minister of Works and mostly contains articles on aspects of reconstn. problem.

JNL., AMERICAN INSTITUTE OF ARCHITECTS, *1945 November, pp. 210-12 :*
Field experience and the making of an architect. Extracts from article by Gropius, BAY STATE BUILDER, 1945 July.

ARCHITECTURAL REVIEW, *1946 January, pp. 2-36 :*
"Industry and Education" special number. Articles Technical Edn. ; past, present and future, by H. E. Broadbent, Principal, Enfield Tech. Coll. Education for Engineers, by G. Mavor. Industry ; university without walls, by J. Forrester. Technical college and its buildings, by D. E. E. Gibson and other articles on tech. edn. buildings and needs.

HISTORY

BUILDER, *1946 January 4, p. 5 :*
Poo-ta-la or the Great Temple of Fo near Zhehol, China. A "sky-scraper" building shown in drg. *c.* 1792, anticipating modern design.

ARCHITECTS' JOURNAL, *1945 December 20, pp. 442, 447-51 :*
Sir John Soane's Dulwich Art Gallery, destroyed by bombs, now to be restored. Article by Summerson, illusd.

ARCHAEOLOGIA, Vol. 91 (*1945*), *pp. 137-56 :*
Stefan von Haschenperg, an engineer to King Henry VIII, and his work. Paper by B. H. St. J. O'Neil, F.S.A. Illusd.

COUNTRY LIFE, *1945 December 7, pp. 1002-5 : 1946 Apl. 5, p. 632*
Thomas White of Worcester : a local architect of the 18th century (1673-4-1748), by Marcus Whiffen ; archt. of Worcester Guildhall, Deanery, All Saints' and St. Swithin's churches. Illusd. Another Ch.

TEKNISK TIDSKRIFT (Stockholm), *1945 Sept. 29, pp. 1047-66 :*
"Teknisk Tidskrift 1870-1945." Jubilee number surveying Swedish and other industrial production and art over 75 years. Illusd.

ARCHITECTURAL REVIEW, *1945 December :*
The Gothic Revival. Special number with articles : Rococo Gothic, Walpole, Bentley and Strawberry Hill ; Romantic Gothic—Goethe and Strassburg, Rickman and Cambridge (by Marcus Whiffen) ; Christian Gothic—Butterfield (by Summerson), Newman and Littlemore (by John Rothenstein) ; Pusey and Leeds (by G. G. Pace). Many illusns. inc. hitherto unpubld. Strawberry Hill drgs.

ARCHITECT & BUILDING NEWS, *1945 December 14, pp. 167-72 :*
Modern architecture. A critical review of "architectural fashions . . . before the war," by H. S. Goodhart-Rendel. Lecture at Regent St. Polytechnic. Illusd.

PROFESSIONAL PRACTICE

NATIONAL BUILDER, *1945 December, pp. 114-17 :*
Building regulations in New York. Long review of book, J. D. McGoldrick ; Bdg. regulations in New York City.

ALLIED ARTS

ARCHITECTURAL REVIEW, *1946 January, pp. 32-3 :*
Design education, by Moholy-Nagy, Inst. of Design, Chicago.

BUILDING : STRUCTURAL ELEMENTS

ARCHITECTS' JOURNAL, *1945 December 20, pp. 457-8 :*
Asphalt floor for confectionery factory. Note in "Questions and Answers."

STRUCTURAL MECHANICS, STRUCTURAL ENGINEERING

THE STRUCTURAL ENGINEER, *1945 December, pp. 549-64 :*
Structural engineering as a profession. Presidential address by F. E. Drury.

FORMWORK

ENGINEERING NEWS-RECORD, *1945 November 1, pp. 92-6 :*
Form linings for concrete surfaces. Note by H. V. Pittmann on use of 1/16 in. absorptive lining at Norfolk Dam.

BUILDING INDUSTRIES & SCOTTISH ARCHITECT, *1945 November, pp. 24-8 :*
"Speed in floor laying." Description of "Plysyl" resin-bonded ply formwork for floors.

AIR TREATMENT ENGINEER, *1946 January, pp. 6-12 :*
The use of fuel consumption and equipment data in the abatement of atmospheric pollution. Paper by A. C. Stern on work of New York City Dept. of Health.

PENCIL POINTS, *1945 November, pp. 105-6 :*
Plywood, in Building Product Facts series.
PENCIL POINTS, *1945 December, pp. 101-2 :*
Plywood (plastic and metal surfacings) Building products facts series, No. 8.
ARCHITECTS' JOURNAL, *1946 January 10, pp. 34-6 :*
Plywood. Paper to Design and Industries Assn., by A. H. Scroggs. History, properties, manufacture, grading, uses, principles.
PENCIL POINTS, *1945 November, pp. 89-92 :*
Modern glues and building construction. Illusd. notes by E. R. O'Hare.
PENCIL POINTS, *1945 December, pp. 87 :*
Concrete blocks, selection and use, technical notes. Illusd.

CONSTRUCTION, including PREFABRICATION

SCOPE, *1945 December, pp. 34-42 :*
The " M.L." flue brick, made from flue-dust waste from power stations. Production and uses described and illusd.
JNL., INCORP. CLERKS OF WORKS ASSN., *1946 February, pp. 17-18 ;*
JNL., R.I.B.A., *1945 December, p. 54 :*
Report on stains in stonework, by Instn. of Structural Engrs.
CONCRETE AND CONSTRUCTIONAL ENGINEERING, *1945 December :*
Prestressed concrete : some new developments. Article by Prof. G. Magnel of R.C. Laby., Ghent University.
ARCHITECT AND BUILDING NEWS, *1945 December 28, pp. 196-8 ;*
BUILDING, *1946 January, pp. 22-5 ;*
KEYSTONE, *1946 February, pp. 9-13 :*
British Cast Concrete Fedn. (B.C.C.F.) system of constn. for single-storey buildings. Illusd. by demonstration house.
ARCHITECT AND BUILDING NEWS, *1946 January 4, pp. 10-14 ;*
JNL., INCORP. CLERKS OF WORKS ASSN., *February, and subsequent issue ;*
JNL., R.I.B.A., *February, pp. 121-5 ;*
MASTER BUILDER, *January, p. 1456, and subsequent issue :*
Plastering. Paper to R.I.B.A. Archl. Science Board by Dr. H. Andrews of B.R.S.

SANITARY SCIENCE AND EQUIPMENT

BUILDING, *1945 December, pp. 328-31 :*
Centralised services as exemplified in prefabd. house by D. E. E. Gibson for Coventry.
ARCHITECTURAL FORUM, *1945 December, pp. 113-2 :*
Sewage disposal plant. Project for City of Port Huron, incorporating advanced theories of treatment.
ARCHITECT & BUILDING NEWS, *1945 December 7, pp. 159-60 :*
Post-war electric wiring. Notes by T. C. Gilbert.
ARCHITECT AND BUILDING NEWS, *1946 January 4, pp. 13-14 :*
Economics in post-war domestic electric wiring, by T. C. Gilbert. Plugs and sockets.
AMERICAN CITY, *1945 November, pp. 95-7 :*
" To give sunlight and daylight a chance." Proposals for assuring adequate natural light to multi-storied dwellings, by W. H. Ludlow. Zoning for light. Housing density.
JNL., R.I.B.A., *1945 November, pp. 14-15 :*
Relative efficiency of single and multiple windows, by P. J. Waldram.
JNL., INSTITUTION OF ELECTRICAL ENGINEERS, *1945 November, pp. 431-3 :*
Some factors affecting the design of electric lighting installations for building interiors, by R. O. Ackerley. Abstract. Lighting method. Lamps and fittings. Diagram of " the lighting problem " showing inter-related factors.
HEATING AND VENTILATING ENGINEER AND JNL. OF AIR CONDITIONING, *1945 December, pp. 233-42 :*
" Heating by radiant baseboards [skirtings] : developments and studies in the U.S.A." Rept. by C. Tasker on work at Univ. of Illinois and elsewhere.
INDUSTRIAL HEATING ENGINEER, *1946 January, pp. 10-13 :*
The influence of heat capacity of walls on internal thermal conditions and heat economy. Extracts from paper by C. E. A. Winslow, L. P. Herrington and R. J. Lorenzi to Am. Soc. H. & V. Engrs.
AIR TREATMENT ENGINEER, *1945 December, pp. 284-6 :*
District heating, by Bertram Baden. Gen. article, inc. costing for small London square.
INDUSTRIAL HEATING ENGINEER, *1946 January, pp. 1-4, 19-22 :*
District heating. Abstract of paper by R. O. Kapp to Inst. of Fuel, *also* Some notes on district heating for town planning, by Sidney Smith. Genl. lay-out in relation to town plan.
SMOKELESS AIR, *1945 Autumn-Winter, pp. 37-8 :*
District heating for housing estates. General descriptive article, by A. E. Margolis.
SMOKELESS AIR, *1945 Autumn-Winter, pp. 34-5 :*
" A new domestic heating system." Rheostatic Co. system with basement boiler and ducts for warm air distribution.

PROOFING

CIVIL ENGINEERING, *1945 December, pp. 275-8 :*
Concrete waterproofing : non-waterproofed concrete and waterproofing agents, by L. E. Hunter, A.M.Inst.C.E.
HEATING AND VENTILATING ENGINEER AND JNL. OF AIR CONDITIONING, *1945 December, pp. 245-53 :*
The thermal insulation of structures. Paper by J. S. F. Gard, reprinted from Fuel Economy Review. Special reference to cold stores, factories.
ARQUITECTURA (la Habana, Cuba), *1945 October, pp. 337 ;*
Architectural acoustics, by P. R. Heyl and V. L. Chrisler. Spanish translation of report by U.S. Dept. of Commerce Bureau of Standards. Concert hall and auditorium design. Bibliog.
CENTRAL COUNCIL FOR THE CARE OF CHURCHES 9TH REPORT, *1941-5, pp. 41-4 :*
Loudspeaker and acoustic problems. Tech. note by Hope Bagenal.
JNL., ROYAL SANITARY INSTITUTE, *1946 January, pp. 19- :*
New remedies in disinfestation [bugs and flies], by D.D.T. Paper by J. L. Burn, M.D., on experiments in Salford common lodging house. Also paper : The Use of D.D.T. as an insecticide, by Col. M. H. Webster.

A.R.P., WAR DAMAGE (including REPAIR)

ARCHITECTS' JOURNAL, *1946 February 28, pp. 186-7 ;*
JNL., R.I.B.A., *1945 December, pp. 35-42 :*
The preservation of historical architecture in the war zones. Paper to R.I.B.A. by Lt.-Col. Sir Leonard Woolley. Italy, France, Belgium, Germany. Illusns. (Italy only).
JNL., CHARTERED SURVEYORS' INSTITUTION, *1945 December, pp. 260-6 ; 1946 January, pp. 303-7 :*
Cost of works payments for war damage with particular reference to alterations and additions and permissible amount, by M. Rowe, Deputy Sec. W.D. Commission. (Jan:) Discussion.
BUILDER, *1946 January 11, p. 56 :*
War damage repair : architects and copyright. Note by W. T. Creswell, K.C.

TOPOGRAPHY

COUNTRY LIFE, *1945 December 21, pp. 1094-7 ; Dec. 28 :*
Ludlow, Shropshire. Article by Chr. Hussey in " Old towns revisited " series.

TOWN AND COUNTRY PLANNING

ARCHITECTS' JOURNAL, *1945 November 29, pp. 402-4 ;*
BUILDER, *November 30, pp. 441-2 :*
Planning under a democracy, by Thomas Sharp. Presidential address to T.P.I.

REGIONAL PLANNING

TOWN & COUNTRY PLANNING, *1945 Autumn, pp. 126-31 :*
" Which Way London : disorderly sprawl . . . or ? " by F. J. Osborn. Critical review of the L.C.C., City and Greater London Plans.
BUILDER, *1945 December 7, pp. 451-2 :*
Merseyside plan, by Longstreth Thompson, abstracted.

TOWN PLANNING, including RE-PLANNING

ARQUITECTURA (la Habana, Cuba), *1945 October, pp. 344-8 :*
Town planning as the foundation of human life. A study by Ethel Saarinen and R. Swanson of the planning of New Castle, U.S.A.
ARCHITECTS' JOURNAL, *1945 December 13, pp. 440-1 ;*
BUILDER, *December 14, p. 475 :*
Visual planning and the City of London. Paper to Archl. Assn. by Dr. N. Pevsner. Variety in form, " shara-waggi."
ARCHITECTS' JOURNAL, *1945 December 13, pp. 429-32 :*
Gravesend replanned. Proposals by G. E. Hill, Boro' Engr. and Plg. Officer.
BUILDER, *1946 January 4, pp. 3-4 :*
Exeter, plan by Thomas Sharp, briefly reviewed by Philip Tilden. Gen. view.
ARCHITECTS' JOURNAL, *1946 January 10, pp. 25-8 ;*
BUILDER, *Jan. 25, pp. 97- :*
The creation of a new town. Extracts from lecture to T.P.I. by J. F. Eccles. Technical problems in developing new town of 60,000. Progress of works. Development of industrial life, etc.
ENGINEERING NEWS-RECORD, *1945 December, pp. 112-56 :*
Construction of Atomic Bomb City in Tennessee. Description of engineering works. Illusd.
ARCHITECTS' JOURNAL, *1945 November 29, pp. 393-5 :*
Reconstruction : profit and loss. Paper to Town Plg. Summer School, by H. W. Wells, F.S.I., Chief Estate Office M.O.T.C.P.

ZONES

ARCHITECTURAL FORUM, *1945 December, pp. 107-9 :*
Shopping centre. Project by L. Jorge and E. Thorn. Model and plans.

BUILDER, *1946 January 11, pp. 57-8 :*
Parking plans for motor vehicles. Abstract of paper by Silkin, Minister of Transport. Illusn. Baldwin-Anger system underground park.

IRISH BUILDER AND ENGINEER, *1945 December 15, pp. 660-1 :*
"Marino lake" planning project, Dublin. 500-acre recreation centre with adjacent housing estates. General lay-out plan.

PENCIL POINTS, *1945 November, pp. 54-65 :*
Ocean Beach Park, New London, Conn., by Payne and Keefe. Large seaside recreation centre, sea beaches, enclosed sea-water bath, restaurants.

ARCHITECT AND BUILDING NEWS, *1946 January 4, pp. 8-9 ;*
Bentley Estate development scheme, Darlaston, by Buckland and Haywood. 354 acres planned for 37 acres industry, 308 acres housing for 8,000-10,000 people. Community centre, etc.

JNL., ROYAL SANITARY INSTITUTE, *1946 January, pp. 11-18 ;*
The unfit house. Paper by J. E. Blease. The categories of existing houses, reconditioning, possibilities and objections. Examples from Salford. Illusd.

Membership Lists

ELECTION : 7 MAY 1946

The following candidates for membership were elected on 7 May 1946 :-

AS FELLOWS (15)

BAILEY : ARTHUR, O.B.E. [*A.* 1933].
BANKART : HUGH CHARLES [*A.* 1922], Bath.
BARRINGTON-BAKER : JAMES [*A.* 1926].
BEECHER : DAVID, M.A. [*A.* 1938], Oxford.
BRAMHILL : HAROLD [*A.* 1931].
FORSTER : EDWARD [*A.* 1925].
HOLT : ARTHUR NEVILLE, Dip.Arch. [*A.* 1929], Liverpool.
HUGHES : (Mrs.) EUGENIE DOROTHY [*A.* 1932], Nairobi, Kenya Colony.
KEMP : LESLIE HAGGER [*A.* 1922].
MANSFIELD : JOHN LESLIE STEPHEN (Capt. R.A.E.), B.Arch. [*A.* 1929], Sydney, N.S.W.
NARWEKAR : SHRIDHAR JAYARAM [*A.* 1931]. Bombay, India.
SCOTT : (Miss) ELISABETH WHITWORTH, A.A.Dip. [*A.* 1928], Bournemouth.
SHAPLEY : RONALD STUART, Dip.Arch.Leeds [*A.* 1936]. Leeds.
SMITH : ARTHUR LLEWELLYN, M.B.E., B.A. (Oxon.) [*A.* 1935].

And the following Licentiate who is qualified under Section IV, Clause 4 (*c*) (ii) of the Supplemental Charter of 1925 :—
FISHER : EWART WILLIAM, J.P.

AS ASSOCIATES (60)

ALLINGHAM : PATRIC HENRY LOMAX.
BALL : WILLIAM KENNETH, M.B.E., Salford.
BARR : THOMAS, Elderslie, Scotland.
BELL : JOHN THORNTON (Major), Bath.
BICKERDIKE : JOHN BUCKLEY.
BRUCE : ALBERT HENRY.
BUNDY : KENNETH DOUGLAS.
BURGESS : ERIC LUTHER (F/Lt.), B.Arch., Ottawa, Canada.
BUTTERWORTH : RICHARD.
CAMPBELL : NOEL EVAN, Bangor, Co. Down.
CLINK : STUART, Wormit, Fife.
COWAN : DONALD.
CRAVEN : EDWARD, Worcester.
DAVIDSON : JOHN WILLIAM (Capt. R.E.), Sheffield.
DAWSON : DAVID WILBERFORCE KWAMI, Manchester.
FORREST : JOHN BERNARD.
FRITH : NORMAN LAWRENCE, P.A.S.I.
GILES : FRANK ALAN.
GILL : WILLIAM HENRY, Bath.
GLOVER : (Miss) NORAH ROSALIE.
GREY : PERCY.
HALL : DUDLEY RADCLIFFE, Gateshead.
HARMSWORTH : BRIAN HUMPHREY, Dip.Arch.
HARTLEY : HAROLD.
HERNE : IVOR ARTHUR CHASEMORE.
HODGSON : ALBERT.
HOSKINS : GEORGE ROBERT STEWART, Wirral.
HOWLES : LESLIE ALFRED, Streetly, Staffs.
HUGGETT : BERNARD WILLIAM.
JACKSON : (Miss) JOAN MURIEL, Sydney, N.S.W.
JENNER : HERBERT EUSTACE.
JONES : CYRIL ALBERT.
KENNEDY : CHARLES VICTOR KITCHENER, Saltash.
KENT : (Miss) IRENE.
KING : KENNETH STANDISH (F/Lt. R.A.F.).
LANE : RONALD JOSIAH, Exeter.
LEYSHON : SYDNEY (Major R.E.), Llantarnam, Mon.
MAGUIRE : JOHN FRANCIS, Dublin.
MASSON : JOHN.
MELLOR : RAYMOND WALTER, Blackpool.
NICOL : JOHN.
O'HERLIHY : DANIEL PETER. B.Arch., Glenageary, Co. Dublin.
OSMOND : (Miss) BARBARA JOAN.
PARSONS : ANTHONY LESLIE.
PEACHEY : NORMAN ALFRED.
PYNOR : HENRY, Sydney, N.S.W.
RAMSBOTTOM : ROY, Bolton.
REED : RICHARD ERNEST.
ROBERTSON : (Miss) GWENDOLYN HOWARD, Artarmon, N.S.W.
ROWE : COLIN FREDERICK, B.Arch.
SIMPSON : JOHN WILLIAM, Newcastle-upon-Tyne.
STOTT : LESLIE GAINSFORD, Brighton.
SUTHERLAND : ROBERT, Glasgow.
SUTTON : HUGH ARTHUR, Hoylake.
TAYLOR : ALEXANDER BRUNTON, St. Andrews.
TRITTON : Miss FREDA MOLLY, Dip.Arch.
WHITE : FRANK SILVESTER (Lt.-Col.), Ilkeston.
WHITE : RALPH BARTON.
WILLIAMS : LEONARD PERCY.
WILSON : RONALD CHARLES, Dip.Arch.

AS LICENTIATES (22)

ABSOLON : RAYMOND GEORGE.
BANTING : EDGAR.
BRASH : SYDNEY MORRISON, Hull.
CHEESMAN : KENNETH.
COLLIS : NORMAN ARTHUR.
CROWE : CECIL JOHN.
DODSON : STANLEY EDWARD, Peterborough.
EDWARDS : SIDNEY ROY, Plymouth.
ERRINGTON : CHARLES HUMPHREY, Newcastle-upon-Tyne.
EVANS : REGINALD JAMES, Plymouth.
GLENDINNING : JOHN, Edinburgh.
HARVEY : JAMES MACGREGOR, Edinburgh.
JUDD : GEORGE WILLIAM, Reading.
KELLY : JAMES WILLIAM DAVID.
KNOPP : GEORGE AUBREY.
MATHER : EDWARD WILLIAM.
MORLEY : NORMAN EYRE, D.S.C. (Commander, R.N.V.R.), Alton, Hampshire.
ROSS : BASIL ARMSTRONG, Newcastle-upon-Tyne.
ROWE : WATSON, Huddersfield.
ROWLINSON : LEONARD GEORGE, Tamworth.
TURNER : JAMES EDGAR, Birmingham.
WILTSHIRE : WALTER ERIC.

ELECTION : 9 JULY 1946

An election of candidates for membership will take place on 9 July 1946. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday, 6 July 1946.

The names following the applicant's address are those of his proposers.

AS HON. FELLOW (1)

DOWNEY : MOST REV. RICHARD, D.D., Ph.D., LL.D., Archbishop of Liverpool, Archbishop's House, Woolton, Liverpool. Proposed by the Council.

AS HON. ASSOCIATES (2)

TALLENTS : SIR STEPHEN (GEORGE), K.C.M.G., C.B., C.B.E., St. John's Jerusalem, Sutton-at-Hone, Dartford, Kent. Proposed by the Council.

TAYLOR : Miss MARGARET STEPHENS, 11 Oakley Street, S.W.3. Proposed by the Council.

AS FELLOWS (9)

DUFFY : THOMAS [*A.* 1930], Lancashire County Council, County Hall, Preston ; "Ben-arty," 24 Greenway, Broughton, Preston. A. T. Nicholson, G. N. Hill and A. J. Hope.

FREEMAN : PHILIP GARFORTH, B.Arch. (Liverpool), Master of Arts (Yale) [*A.* 1930], 96 Dorset House, Gloucester Place, N.W.1 ; 39 Dorset Square, N.W.1. G. G. Wornum, D. L. Bridgwater and Denis Poulton.

GODDARD : HENRY GORDON [*A.* 1933], 1 West Street, Leicester ; Newton Harcourt Manor, Leicester. W. J. Prince, M. W. Pike and Howard Robertson.

GREEN : DAVID JOHN, A.A.Dip. [*A.* 1936], 10 North Parade, Lowestoft, Suffolk ; Blofield House, Alburgh, Harleston, Norfolk. T. F. Trower, H. D. Roberts and W. B. Simpson.

HIGHET : GRAEME IAN CAMPBELL [*A.* 1930], 10 Bayley Street, Bedford Square, W.C.1 ; Verrieford, Cleardown, Woking, Surrey. J. M. Easton, Howard Robertson and S. G. Livock.

KING : LAWRENCE EDWARD [*A.* 1930], 37 Gordon Square, W.C.1 ; The Wayside, Shenfield Common, Brentwood, Essex. A. B. Knapp-Fisher, Prof. A. E. Richardson and C. S. White.

TAYLER : HERBERT, A.A.Dip. (Hons.) [*A.* 1936], 10 North Parade, Lowestoft, Suffolk ; Blofield House, Alburgh, Harleston, Norfolk. H. D. Roberts, T. F. Trower and Brian O'Rorke.

And the following Licentiates who are qualified under Section IV, Clause 4 (*c*) (ii) of the Supplemental Charter of 1925 :—

HALL : HAROLD SAUNDERSON, 26 South St. Mary's Gate, Grimsby ; 14 Weelsby Road, Grimsby. S. P. Dales, Walter Brand and F. A. Broadhead.

HEATHCOTE : MAJOR CHARLES HAROLD, T.D., 94 Thornton Road, S.W.12. Prof. Sir Patrick Abercrombie, H. T. Seward and Howard Robertson.

AS ASSOCIATES (20)

The name of a school or schools after a candidate's name indicates the passing of a recognised course.

ATKINSON : GEORGE ARTHUR [Final], 82 Kenilworth Avenue, Kingston-upon-Hull. G. D. Harbron, Allanson Hick and W. B. Wheatley.

BRYAN-BROWN : MISS BEATRICE GRACE [Poly., Regent Street, London]. 104 Bethune Road, Stoke Newington, N.16. E. C. Scherrer W. H. Godfrey and C. W. Box.

BULLEN : HENRY WALKER [Special Final Exam.], 8 Taviton Street, W.C.1. Alfred Forrester, Paul Badcock and A. F. C. Bentley.

CLARK : MISS CONNIE [Final], 114 Endyke Lane, Kingston-upon-Hull, G. D. Harbron, H. Andrew and F. J. Horth.

COTTRILL : ALLAN [Special Final Exam.], 21 Porchester Place, W.2. W. C. Young, Isaac Taylor and Hubert Bennett.

DOWNIE : MISS MARGARET NANCY [Final], 31 Castleton Mansions, Barnes, S.W.13. L. H. Bucknell, Miss Ruth Ellis and E. M. Fry.

GUTTERY : MISS BERYL MARGARET [Poly., Regent Street, London], 10 Burdon Lane, Cheam, Surrey. E. C. Scherrer, J. K. Hicks and Brian O'Rorke.

JEFFCOAT : STANLEY [Sch. of Arch., Victoria Univ., Manchester], 6 King's Road, Fairfield, Buxton. Prof. R. A. Cordingley, Francis Jones and J. P. Nunn.

KEMP : ALAN MURRAY [Poly., Regent Street, London], 96 Streathbourne Road, Tooting Bec Common, S.W.17. Richard Sheppard, E. C. Scherrer and J. K. Hicks.

LANG : DAVID EBENEZER [Sch. of Arch., Edin. Coll. of Art], 6 Laurieston Gardens, Edinburgh, 3. E. J. Macrae, A. H. Mottram and Leslie Grahame-Thomson.

LEWIS : GRAHAM EVERARD [Arch. Assoc., London], 32 Little London, Chichester. L. H. Bucknell, J. M. Easton and Howard Robertson.

LOGAN : WILLIAM (Jnr.) [Sch. of Arch., Edin. Coll. of Art], 6 Ainslie Place, Edinburgh. Leslie Grahame-Thomson, A. H. Mottram and J. R. McKay.

OWEN : ROY EDWIN [Poly., Regent Street, London], 53 Great Thrift, Petts Wood, Kent. E. C. Scherrer, J. K. Hicks and D. W. Aldred.

POWELL : PETER NOLAN [Welsh Sch. of Arch., The Tech. Coll., Cardiff], White Lodge, Pantmawr Road, Rhiwbina, Cardiff. Lewis John, Sir Percy Thomas and T. A. Lloyd.

SMITH : FREDERICK NEALE [Sch. of Arch., Univ. of Toronto, Canada], 121 Crouch Hill, N.8. Howard Robertson, F. R. S. Yorke and Maxwell Ayrton.

STANLEY : ERIC WESTON [Sch. of Arch., Victoria Univ., Manchester], 180 Oxford Road, Manchester, 19. Prof. R. A. Cordingley, F. L. Halliday and J. P. Nunn.

URQUHART : WILLIAM JOHN [Final], 2 Westfield Road, Edinburgh, 11. H. O. Tarbolton, Sir Matthew Ochterlony and J. R. McKay.

WATSON : CLARENCE LONSDALE [Final], 5 Raincliffe Avenue, Scarborough, Yorks. H. Lidbetter, D. W. Rowntree and H. E. Askey.

WILKIE : ALEXANDER ABERCROMBIE [Final], Rhonadale, Albert Road, Maxwelltown, Dumfries Henry Wilson, E. S. Bell and A. N. Malcolm.

WONES : GUY KNIGHT (Capt. R.E.) [Birmingham Sch. of Arch.], Thurnby, Danescourt Road, Tettenhall, Wolverhampton George Drysdale, T. M. Ashford and A. T. Butler.

AS LICENTIATES (20)

AMBLER : JAMES, Borough Surveyor's Office, Guildhall, Shrewsbury ; 174 Copthorne Road, Shrewsbury. Saml. Taylor, S. G. Butler and A. G. Chant.

AYERS : WILLIAM CECIL, M.C., c/o Messrs. W. J. Morley & Son, 269 Swan Arcade, Bradford ; 72 Thornton Lane, Bradford. Eric Morley and the President and Hon. Sec. of the West Yorks' Soc. of Arch. under Bye-law 3 (*a*).

BOYMAN : LESLIE THOMAS (Capt. R.E.), C.R.E., S.W. Coastal Chambers, 15 Elizabeth Street, S.W.1 ; 82 Drake Road, Harrow, Middlesex. Ernest Bates, Charles Blythin and T. E. Scott.

BRADLEY : HARRY, Borough Surveyor's Office, Town Hall, Nelson, Lancs. ; 17 Heights Road, Nelson. Applying for nomination by the Council under Bye-law 3 (*d*).

DAVIDSON : CHARLES STEWART MILNE (Major), Hillside, Compton, Paignton, Devon. T. S. Tait, J. H. Markham and Fredk. MacManus.

DENNING : GEORGE ERNEST WALTER, St. Aubyn Estates, Ltd., Manor Office, Devonport ; 6 St. Martin's Avenue, Peverell, Plymouth. J. L. Fouracre, F. J. Taylor and W. H. May.

GREEN : LEONARD HENRY, Middlesex County Council County Architect's Dept.) : "White House," Coney Hill Road, West Wickham, Kent. C. D. Andrews, C. G. Stillman and H. W. Burchett.

JONES : MAXWELL, Westminster Chambers, 106 Lord Street, Southport, Lancs ; 82 King Street, Southport. Howard Robertson, G. E. Tonge and S. McLauchlan.

KANE : JOHN ROBERT, D.C.R.E.I. (Externals), Ambrosden, Nr. Bicester, Oxon. E. S. Smith, C. J. Epril and W. H. Hobday.

LLEWELLYN : BENJAMIN THOMAS, Assistant Architect, Architect's Dept., Swansea C.B. Council ; 26 High Street, Clydach, Swansea. E. Morgan and the President and Hon. Sec. of the South Wales Inst. of Arch. under Bye-law 3 (*a*).

MACDONALD : DAVID, Ministry of Works, Houses of Parliament, Westminster, S.W.1 ; 63 Redfern Avenue, Hounslow. C. J. Mole, A. C. Bossom and J. H. Markham.

MENDUS : HOWEL, 11 Queens Road, Sketty, Swansea. J. H. Jones, O. S. Portsmouth and H. A. Ellis.

NEILL : JOHN MCBRIDE, 7 Chichester Street, Belfast ; "Ben-Edar," Holywood, Co. Down. T. R. Eagar and the President and Hon. Sec. of the Royal Soc. of Ulster Arch. under Bye-law 3 (*a*).

O'HARA : FRANCIS (Captain), The "Elms," East Calder, Midlothian. J. R. McKay and the President and Sec. of the Dundee Inst. of Arch. under Bye-law 3 (*a*).

PRATLEY : GILBERT JOHN, c/o Commissioners of Crown Lands, 1 Cambridge Gate, Regents Park, N.W.1 ; 66 Redcliffe Square, S.W.10. T. E. Scott, Frederick Gibberd and Wells Coates.

RICHARDSON : RALPH EDWIN, c/o Messrs. A. K. Tasker and Austin Child, 25 New Bridge Street, Newcastle ; 261 Benton Road, Longbenton, Newcastle-on-Tyne. Lieut.-Colonel A. K. Tasker, P. C. Newcombe and R. N. MacKellar.

SHEPPARD : CYRIL ALFRED FREDERICK, Architect's Office, Messrs. J. Lyons & Co., Ltd., Cadby Hall, W.14 ; 2 Camborne Way, Heston. G. M. Kingsford, Joseph Emberton and W. E. Cross.

STACEY : JOSEPH, c/o Messrs. Sutcliffe Taylor & Millard, 5 Manchester Square, W.1 ; 60 Holders Hill Drive, Hendon, N.W.4. E. R. Taylor, B. L. Sutcliffe and F. J. Lander.

THOMSON : DUNCAN, c/o Messrs. Norcon, Ltd., 351, Brixton Road, S.W.9 ; 25 Sunningdale Avenue, Eastcote, Ruislip. Applying for nomination by the Council under Bye-law 3 (*d*).

THRAVES : JOHN HERBERT, Westminster Bank Chambers, Austin Friars, Newport, Mon. ; "Pendennis," 45 Oakfield Road, Newport. H. H. Dawson, G. H. Davies and C. F. Bates.

ELECTION: OCTOBER 1946

An election of candidates for membership will take place in October 1946. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday, 28 September 1946.

The names following the applicant's address are those of his proposers :—

AS FELLOW (1)

SOMJEE : HABIB JUSABBHOY ALLADINBHOY, B.A., Dip.Arch. (Lond.) [*A.* 1936], Prospect Chambers Annexe, Hornby Road, Fort, Bombay ; East View, Raghoji Road, Cumballa Hill, Bombay, 26. S. S. Rouben. D. W. Ditchburn and P. P. Kapadia.

AS ASSOCIATES (12)

The name of a school or schools after a candidate's name indicates the passing of a recognised course.

BHALLA : JAI RATTAN [Final], c/o Messrs. Staffad & Co., 9 Forjett Hill, Bombay, 26. Frederick McKnight, C. M. Master and S. S. Reuben.

CANDIOTES : GEORGE, Dip.Arch. (Rand) [Passed a qualifying exam. approved by the Inst. of S.A. Arch.], 4 Lincoln House, Meyer Street, Germiston, South Africa. Applying for nomination by the Council under Bye-law 3 (*d*).

KHWAJA : ZAHIR-UD-DEEN [Final], c/o M. M. Ahsan, Esq., Chief Secretary, Nabha State, Nabha, India. C. M. Master, S. S. Reuben and Frederick McKnight.

JENKINS : JOHN TAMPLIN [Passed a qualifying exam. approved by the Inst. of S.A. Arch., Kenilworth Court, Kenilworth, Cape. Robert Howden, A. S. Furner, and applying for nomination by the Council under Bye-law 3 (*d*).

MEHTA : NOSHIR NAOROJI [Final], The Shelter, 119 First Road, Khar, Bombay, India. C. M. Master, S. S. Reuben and B. E. E. Doctor.

NIEBUHR : RICHARD LODEWYK, B.Arch.(Rand) [Passed a qualifying exam. approved by the Inst. of S.A. Arch.], 28 First Street, Malvern, Johannesburg, South Africa. Gordon Leith, A. S. Furner, and applying for nomination by the Council under Bye-law 3 (*d*).

OVERALL : JOHN WALLACE [Passed a qualifying exam. approved by the R.A.I.A.], 11A Werona Avenue, Killara, Sydney, N.S.W. A. S. Hook, Prof. Leslie Wilkinson and B. J. Waterhouse.

PRISSMAN : BENJAMIN, B.Arch.(Rand) [Passed a qualifying exam. approved by the Inst. of S.A. Arch.], 65 Fifth Street, Lower Houghton, Johannesburg, South Africa. Applying for nomination by the Council under Bye-law 3 (*d*).

REYNOLDS : RODERICK BARKER [Passed a qualifying exam. approved by the Inst. of S.A. Arch.], Hotel Lennox, Gardens, Cape Town, South Africa. Prof. L. W. T. White, James Morris and R. F. R. Day.

SAMARASEKERA : AGAMPODI JUSTIN VICTOR DE ZOYSA [Final], Assistant Architect, Public Works Department, Colombo, Ceylon. Sir T. P. Bennett, C. W. Box and M. L. Winslade.

SPOONER : PETER [Passed a qualifying exam. approved by the R.A.I.A.], 60 Dunlop Street, Epping, Sydney, N.S.W., Australia. Prof. Leslie Wilkinson, A. S. Hook and B. J. Waterhouse.

TACON : IVOR CHARLES RUSSELL [Passed a qualifying exam. approved by the R.A.I.A.], 28 Richardson Street, Fairfield, N.S.W. Prof. Leslie Wilkinson, and applying for nomination by the Council under Bye-law 3 (*d*).

MEMBERS' COLUMN

APPOINTMENTS

MR. H. HENDERSON [*A.*], on release from the forces, has taken up the appointment of Architect for Civil Development and Re-construction in Baluchistan and will be pleased to receive trade catalogues with reference especially to equipment for hospitals, schools, farm buildings, air conditioning and ventilating for public buildings, and relating to sewage disposal, at D.C.E. Office, Quetta.

MR. F. MARTINDALE [*F.*] has resigned his appointment as Diocesan and Cathedral Surveyor of Carlisle and is carrying on his practice at 27 Victoria Road, Deal, Kent (Deal 950). Mr. Christopher Martindale [*A.*] is carrying on the practice of J. H. Martindale & Son at Cathedral Chambers, Castle Street, Carlisle (Carlisle 374) and has been appointed Diocesan and Cathedral Surveyor.

PRACTICES AND PARTNERSHIPS

MR. A. HODSDON ARCHARD [*L.*] (late Major R.E.) and MR. K. COURTNEY DYER [*L.*] (late Captain R.E.) are practising at 20 Lowndes Street, Knightsbridge, S.W.1 (Sloane 2078), where they will be pleased to receive trade catalogues, etc., particularly those relating to school equipment and fittings.

MR. ARTHUR J. ARDIN [*A.*] has recommenced practice at 42 Brook Street, London, W.1 (Mayfair 8944), where he will be pleased to receive trade catalogues, etc.

MR. HARRY ARMITAGE [*A.*] has taken over the practice of the late Mr. F. Ratcliff [*A.*] at 70 Surrey Street, Sheffield 1 (Sheffield (Central) 24749), where he will be pleased to receive trade catalogues, etc.

MR. ERIC S. W. ATHERTON [*A.*] and MR. BASIL E. BRENCHLEY [*A.*] have entered into partnership and are practising at 36 Paddington Street, London, W.1 (Welbeck 6354), 8 Byron Court, Harrow, Middlesex (Harrow 0596), and 84 Wilmot Way, Banstead, Surrey (Burgh Heath 1362).

MESSRS. J. STANLEY BEARD AND BENNETT [*F/L.*], 101-103 Baker Street, London, W.1, have taken into partnership their chief assistant, Mr. A. J. Hale [*L.*].

MR. C. G. BOUTCHER [*F.*] is re-establishing his practice in Singapore, Kuala Lumpur, Ipoh and Penang. His address in future will be 19 Beach Road, Penang, Malaya.

MR. J. W. BUCHANAN [*F.*] (late Squadron Leader R.A.F.) and MR. H. G. COULTER, M.B.E., M.C. [*A.*] (late Major), have since their release from the Forces entered into partnership and will practice under the style of Buchanan and Coulter at 5 Bedford Row, London, W.C.1 (Chancery 7881).

MR. S. STOCKFORD CARELESS [*F.*] has taken into partnership Mr. Bernard J. Ashwell [*A.*]. They will practice as Stockford Careless and Ashwell at 20 High Street, Stroud, Glos. (Stroud 24), and 19 St. Stephen's Street, Bristol 1 (Bristol 25125-6). Mr. Bernard J. Ashwell will be continuing his London practice temporarily from the pre-war address at 26 Lloyd-Baker Street, W.C.1 (Terminus 3751).

MR. C. A. CROZIER COLE [*A.*] (late Captain R.A.), on release from the Forces, has resumed his practice with Mr. W. B. Rolfe [*L.*] and they will practice under the style of Rolfe & Crozier Cole at 1 Belmont, Bath (Bath 3004).

MR. BERNARD H. DALE [*L.*] has taken into partnership Major P. G. Tutte, Chartered Surveyor, and they will practice under the title of Bernard H. Dale and Partners, Architects and Surveyors, Haddon Hall, Ogle Road, Above Bar, Southampton (Southampton 2601).

MR. SAMSON A. ELIJAH [*A.*], of Sampson & Co., has recommenced practice at 20a Jeshtaram Baug, Vincent Road, Dadar, Bombay 14, India, where he will be pleased to receive trade catalogues, etc.

MR. J. HOMERY FOLKES [*A.*], on release from the Forces, has resumed practice with his father, Mr. Hugh E. Folkes [*F.*] under the style of Folkes & Folkes at 34 Hagley Road, Stourbridge (Stourbridge 5675).

MR. G. EDWARD FOOTE [*A.*] (late Captain R.E.) on release from the Forces, has been taken into partnership by his father, Mr. Alex Allan Foote [*F.*] and they will practice under the style of A. A. Foote & Son at 9 York Place, Edinburgh 1 (Edinburgh 20090).

MR. H. IRVING GRAHAM [*L.*] has taken into partnership Mr. A. C. Roy [*A.*] (late Major R.E.). The firm will be known as Graham & Roy and the practice will continue at the present address 6 Paternoster Row, Carlisle (Carlisle 1085).

MR. J. C. JONES [*A.*] has resumed his practice from 4 May 1946 at The Old Brew House, 41A Winsley, near Bradford-on-Avon, Wiltshire, and all correspondence, accounts, etc., should in future be addressed to him at that address.

MR. R. A. KEATLEY [*L.*], until recently Chief Architectural and Civil Engineering Assistant at London Airport, is now practising at 29-31 London Road, Twickenham, Middlesex (Epsom 9634), where he will be pleased to receive trade catalogues, etc.

MR. RALPH MORT [*A.*], having terminated salaried employment, has commenced private practice at 21 Bramley Avenue, Sheffield, 9, where he will be pleased to receive trade catalogues, etc.

MR. J. PRICE NUNN [*F.*] has taken into partnership his chief assistant, Mr. C. W. Quysner [*A.*]. The firm will be known as Price Nunn & Quysner and will practice at 180 Oxford Road, Manchester (Ardwick 2113).

MR. C. C. G. OSBORNE [*L.*], formerly practising at Lloyds Bank Chambers, Lansdowne, Bournemouth, has now resigned from his temporary appointment as architect to Fareham Urban District Council and has resumed private practice at Portland Chambers, Fareham, Hants, where he will be pleased to receive trade catalogues, etc.

MR. R. J. PAGE [*A.*], of Abberton Manor and Frinton-on-Sea, has opened an office at 47 North Hill, Colchester (Colchester 4642), where he will be pleased to receive trade catalogues, etc.

MR. VINCENT ROTHER [*A.*] and MR. T. A. L. BELTON [*A.*] have commenced practice at 7 The Grove, Highgate, London, N.6 (Mountview 7205) and will be pleased to receive trade catalogues, etc.

MR. L. W. RUSSELL [*L.*] has commenced practice at 3 Upper Bridge Street, Canterbury (Canterbury 3683), where he will be pleased to receive trade catalogues, etc.

MR. J. ROLAND SIDWELL [*A.*], previously a Senior Assistant in the City Architect's Department, Coventry, commences practice at 27 Union Street, Coventry, on 1 June and will be pleased to receive trade catalogues, etc.

MR. R. J. SPARROW [*A.*] commences practice from 1 July 1946 at his temporary address, "Oatlands," Elmstead Market, near Colchester (Wivenhoe 432), where he will be pleased to receive trade catalogues, etc.

MR. RICHARD TURLEY [*A.*] is now practising at 49 Jesmond Road, Newcastle-upon-Tyne 2, where he will be pleased to receive trade catalogues, etc.

CHANGES OF ADDRESS

MR. J. HUBERT BROWN [*A.*] has removed to 33 Molesworth Street, Dublin (Dublin 64700), where he will be pleased to receive trade catalogues, etc.

MR. A. E. THURMAN MATTHEWS [*A.*] (late Captain R.E.) has removed from 30 Sefton Road, East Croydon, Surrey, to Ripley House, 10, Streatham Common South, London, S.W.16, where he will be pleased to receive trade catalogues, etc.

MR. GEORGE P. STAINSBY [*A.*] has removed from 25 High Street, Stockton-on-Tees, to 57 High Street, Stockton-on-Tees (Stockton-on-Tees 66093), where he will be pleased to receive trade catalogues, etc.

MR. H. J. TEBBUTT [*A.*] is now established at c/o Messrs. Leigh & Orange, P. & O. Steamship Company Building, Hong Kong.

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

ASSOCIATE, A.M.T.P.I. (36) requires partnership in Cornwall, Devon or Somerset. Recently returned from abroad but native of Devon and able to work up own connection.—Apply Box 260, c/o The Secretary, R.I.B.A.

ASSOCIATE (B.A. Cantab.), aged 40, wishes to join London architect with established practice on partnership basis, commencing September 1946. Available interview now. Commissions in hand and capital available.—Apply Box 255, c/o The Secretary, R.I.B.A.

ASSOCIATE (31), Scot, seeks senior position with established practice with a view to partnership; specialised in industrial work; Scotland preferred.—Apply Box 264, c/o The Secretary, R.I.B.A.

FELLOW, engaged upon municipal housing and practising in London and Southern Counties, is willing to consider applications for a junior partnership on salary and percentage of profit basis. Applicants must be members of R.I.B.A., town planning qualifications an advantage.—Apply, stating age and qualifications, to Box 262, c/o The Secretary, R.I.B.A.

MEMBER wishes to purchase established practice in London.—Apply Box 247, c/o The Secretary, R.I.B.A.

MEMBER with established practice in Midlands desires to contact young and energetic Associate with a view to ultimate partnership.—Apply Box 259, c/o The Secretary, R.I.B.A.

PARTNERSHIP offered in a 30-year established London and country practice to an Associate. Applicant must be energetic and good in modern design and construction.—Apply Box 249, c/o The Secretary, R.I.B.A.

ASSISTANTS

TEMPORARY ASSISTANCE.—A number of full-time students of architecture at the Northern Polytechnic, Holloway Road, N.7, desire to obtain temporary employment in architects' offices during the forthcoming long vacation. Members who are in need of such assistance are invited to communicate with the Head of the School, Mr. T. E. Scott, who will be pleased to arrange for suitable students to be interviewed.

TWO YOUNG QUALIFIED ARCHITECTS with sound knowledge of building construction and with artistic talent, required by Ernst May, one-time Director of Housing and Town Planning, Frankfurt a/M, now practising in Kenya. Good salary, free passage out, one year contract providing for prolongation.—Apply Box 258, c/o The Secretary, R.I.B.A.

WANTED AND FOR SALE

FOR SALE. Architect's 2-foot ivory rule; in excellent condition.—Apply, stating offers, to Box 263, c/o The Secretary, R.I.B.A.

FOR SALE. Theodolite and tripod, four screws. Levelling staff, 6 ft. poles and 100 ft. chain. £35.—Apply Box 254, c/o The Secretary, R.I.B.A.

FOR SALE. Twelve-inch Cook three-point dumpy level, with compass, tripod and levelling staff. Traversing sextant with fully divided scale and vernier. Both in new condition, complete in cases; also various office equipment, including "T" squares and drawing boards.—Apply Box 257, c/o The Secretary, R.I.B.A.

WANTED. Member wishes purchase a buckram bound volume, or buckram binding case for Vol. 50 of the R.I.B.A. JOURNAL; also index for Vol. 49. Would buy a complete bound copy of Vol. 49 with index if index not available separately.—Apply Box 253, c/o The Secretary, R.I.B.A.

WANTED TO PURCHASE. The Editor R.I.B.A. JOURNAL requires a diminishing glass, large size preferred, for use in the JOURNAL office.—Apply The Editor, R.I.B.A. JOURNAL.

WANTED TO PURCHASE. Copy of "Town Planning in Practice" by Raymond Unwin.—Apply Box 266, c/o The Secretary, R.I.B.A.

WANTED, urgently. Plan chests and quick set level complete.—Write, giving details including material, size, condition and price, to Box 256, c/o The Secretary, R.I.B.A.

ACCOMMODATION

ASSOCIATE wishes to share London office accommodation, preferably with architects commencing practice with view to mutual assistance, or would rent small room with use of telephone.—Apply Box 261, c/o The Secretary, R.I.B.A.

PROVINCIAL ARCHITECT seeks office accommodation in W. or S.W. London.—Apply Box 265, c/o The Secretary, R.I.B.A.

MEMBERS RELEASED FROM THE SERVICES, ETC.

The following members have notified the R.I.B.A. that they have been released from the Services and are resuming practice and would like to receive trade catalogues, information sheets and other data, etc.:

MR. C. KNIGHT ADAMS [*L.*], 5 Elm Bank, Nottingham.

MR. KEITH AITKEN [*A.*], 30 Fitzroy Square, London, W.1 (Euston 2039).

MR. E. L. ANSELL [*A.*], 32 Chelwood Gardens, Kew, Surrey.

MR. RALPH G. COVELL [*A.*] (late Major R.E.), 5 Mitcham Road, Tooting, London, S.W.17 (Streatham 6756).

MR. E. HUTTON CROSBEE [*A.*], 21 Claremont Crescent, Edinburgh 7.

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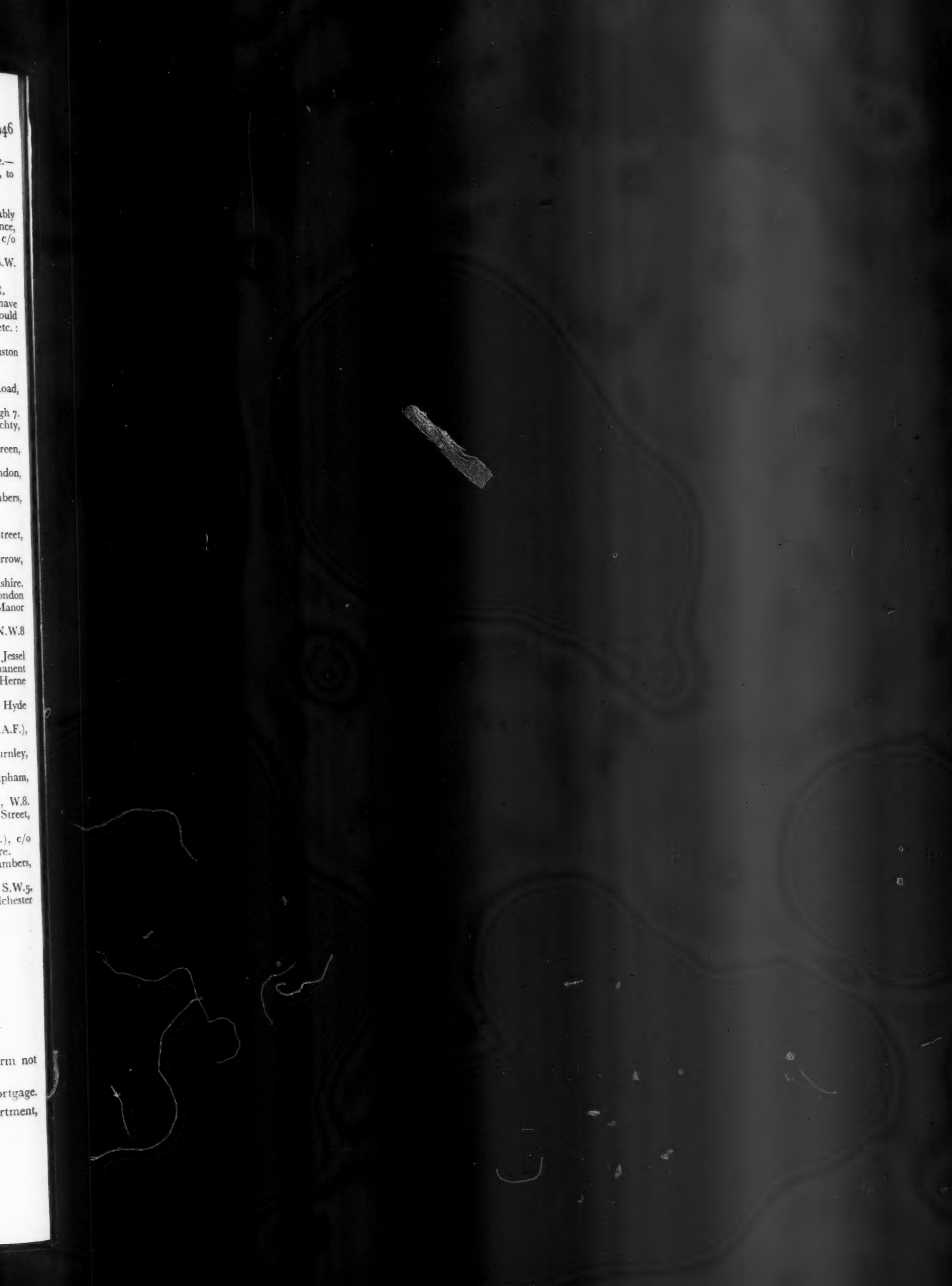
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